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PROTRACTED INCUBATION IN MALARIAL FEVER

Report of a Case and a Review of the Literature

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In an attempt to demonstrate the practicability of importing a suspended culture of mosquito sporozoites from England, in October 1935, one of the inoculated cases provided the first instance in America, as far as known, of experimental protracted incubation. The origin of the sporozoite suspension was the *Plasmodium vivax* (British Ministry of Health "Madagascar" strain) from *Anopheles maculipennis* var. *atroparvus*, prepared in collaboration with Mr. P. G. Shute, F. R. E. S., the Assistant Director of the Ministry of Health Malaria Laboratory at Horton, England, on October 14, 1935.

The culture medium prepared for this purpose was made up from defibrinated human blood and enriched with sodium dextrose to 1 percent, as is usual. The blood was taken from a malaria-free subject (the writer) the previous day and held at a temperature of 48° F. for 36 hours before planting.

The imported benign tertian malaria strain brought back from England was inoculated on October 23, 1935, into a patient at St. Elizabeths Hospital, Washington, D. C. The first malarial paroxysm followed 1 year later, on October 6, 1936, showing a severe attack accompanied by eight well-marked paroxysms with temperature elevation to 106° F. Blood films taken from this patient demonstrated a moderate number of typical amoeboid *vivax* rings and a scanty number of gametocytes from one-half to three-quarters grown.

The clinical history of this patient (case no. 20843) is as follows: An adult male, had not been out of St. Elizabeths Hospital, in Washington, D. C., for 23 years prior to inoculation, and was kept under continual observation during the incubation period.

The important question of recrudescence or reinfection may be definitely ruled out, and it is to be noted that no malaria case has ever occurred in the hospital reservation other than through artificial inoculation. After the sporozoite suspension had been administered, the patient was returned to his regular employment as a laundry worker and was observed closely for a period of 2 months for an occurrence of malarial symptoms. Nothing of note occurred. He had been given routine semiannual hospital temperature observations,

January 8 through January 14, 1936 and again 6 months later, July 8 through July 14. He worked daily in an apparently normal state of health until October 6, 1936, when he suffered his first malarial paroxysm, with an elevation of temperature to 103° F. Chills and fever recurred on the following dates without interruption:

	°F.
October 8.....	106
October 10.....	106
October 12.....	105.4
October 13.....	105
October 15.....	105.6
October 17.....	105.8
October 19.....	104

He began to show unusual weakness, and was troubled with severe emesis following October 10. This became so severe that it was necessary to terminate the malaria on October 19, and no chills have recurred since that date. Blood smears were taken finally on October 19, at which time the presence of uncomplicated tertian malaria was confirmed. After the fourth paroxysm, blood was used to inoculate a second patient, followed by a definite paroxysm with temperature elevation to 104.8° on the 13th day, and tertian schizonts were demonstrated on the following day.

On consulting the literature we find that Korteweg, a practicing physician in the malaria section of the Netherlands, as early as 1902 made observations from first hand which threw doubt on the general applicability of the pyrogenic limit accounting for the incubation in the usual successive generations in tertian malaria. He encountered numerous cases of malaria from March to May, when the anopheline prevalence was at a low peak and there was no evidence of infected mosquitoes among the hibernated (winter-surviving) forms. He concluded that these cases were due to infections acquired during the preceding autumn. This view was supported by Schoo and other prominent Dutch malariologists. The early work of Swellengrebel, in 1921, showed that malaria infection in anophelines in the same section was confined to autumn and winter and was almost absent during the height of the clinical malaria season. About this time, Korteweg produced new evidence showing that individuals living in houses where malaria occurred in early autumn ran a greater risk of contracting malaria before June 1 than other persons under normal conditions.

These observations were given further experimental support in 1926 by James and Shute, who, with natural insect transmission, encountered cases which failed to respond in autumn or winter, but showed first symptoms in the following June and July, as results of the attacks of mosquitoes. In a series of trials, James, in 1927, recorded the history of these experimental cases, of which one patient

was bitten by infected mosquitoes in November; two patients in December; and a fourth in February, all four developing typical malaria, but not before 6 to 9 months had passed.

Then followed the confirmatory experimental transmissions of the Dutch malariologists, Schöffner, Korteweg, and Swellengrebel, in 1928. These trials were first introduced by using heavy infections of anophelines which were given up to 45 opportunities to transmit the infection by biting. Infections resulted in the usual incubation period of from 2 weeks to 22 days. Varying these infection experiments with the application of one to two bites, using only one mosquito in four of the trials and two on two other occasions, malarial fever was produced at the end of a protracted incubation period, extending through the winter and spring, of from 7 months and 16 days to 9 months, the results coinciding with the work of James and Shute, who reported incubations of 7 to 9 months, using parietic patients under similar conditions. In these tests the six volunteers were Dutch scientists, living in Holland at the time of the experimental inoculations. They used meticulous foresight in observing their physical condition so as to guard against overlooking slight attacks or recurrences of any possible previous infection. During the 3 weeks following the infecting bites, temperatures were taken thrice daily and thick blood films were examined at frequent intervals, and they could conscientiously rule out the possibility that relapses had caused slight undetected attacks during the entire period of the 9 months while the subjects were under clinical surveillance. As a result of these demonstrated long incubation periods with experimental malaria, the Dutch experimenters concluded that the clinical manifestations observed as late as July may be accounted for by infections acquired during the preceding autumn.

James and Shute (1926) reported the first experimental evidence of long latency in malaria transmitted by mosquito bites in an attempt to account for the origin of their cases. They state that, although they are not prepared to prove that the apparent failures were due to an insufficiency of the infected dose, many examples of long latency of malaria in nature are recorded in the literature; but up to the present time the matter has not been proved by laboratory work. They make interesting notations before committing themselves in one set of experiments in which ten individual mosquitoes were used to infect patients prior to January. They suggest that, about the middle of the period, the infected insect hosts had discharged a large proportion of the sporozoites into the early patients bitten and that the persons bitten during the second half of the period may have received only a small dose of sporozoites, and it was during this interim that they record most of the failures in their malaria therapy tests from this same batch of mosquitoes.

On the subject of the infection in patients by the bites of mosquitoes, they note that an interesting result in relation to the malaria problem in nature is the failure of some of the patients, who were bitten during the winter, to develop malaria.

This was regarded as a surprise, because throughout the summer there had been no failures in their attempts to induce malaria with a similar batch of anophelines, using the identical strain of parasites. They state: "If any patient who has not yet developed malaria as a result of mosquito bites in November or December should develop an attack in the spring, we shall know that the infection has remained latent throughout the winter."

In 1931, James summarized the records of unusual incubation periods and latent infections. Among the 746 incubation periods in cases of primary tertian malaria caused by mosquito bites, several instances are recorded wherein 6 months or more lapsed after the patient had been bitten before the onset of a malarial attack. He states that these cases of infection should be correctly described as having remained latent. This condition of latency has often been described as occurring in natural circumstances, but opportunities for observing the experiments do not often arise in the routine practice of induced malaria therapy. Here, when it is reported that the infection has failed to take, reinoculation by mosquito bites or by blood must usually be repeated until it is effective. The English workers observed instances among patients who, for various reasons, were not subjected to reinfection when the primary infection was reported to have failed. They state: "It will be seen that the seasonal clinical incidence is about the same as that of natural benign tertian malaria in northern Europe and that the spring rise about which so much has been written, is due to recurrences in persons who had their primary attack in September; that in natural circumstances, the occurrence of these cases in the spring is not due to any special climatic or other environmental condition peculiar to that season."

Colonel James next considered the dose of infection. Infection by the bites of two or three lightly infected mosquitoes is usually quite different from the result of infection by the bites of many heavily infected insects. When only a small dose of sporozoites is injected, the result is an abortive primary fever which passes off in 2 or 3 days, or there is no primary attack at all, and the infection remains latent; but the difference is only one of degree, and the subsequent course of both types is the same; namely, there is a long period of complete freedom from fever and parasites. This observation is a repetition in the laboratory of what happens in countries like Holland, where (because only one or two lightly infected mosquitoes are responsible for each indigenous case) most of the cases are abortive or latent in the primary attack and are detected only at the period of recurrence

in the following spring. The recurrences, or late relapses, which appear 7 months after the primary attack of benign tertian, occur only in cases infected by the bites of mosquitoes; they are never seen in cases induced by the inoculation of malarial blood.

Christophers, in commenting on James' paper (1936), believes that experimental conditions cited in human malaria are duplicated in bird malaria in his own experiments in which a great number of birds bitten by single mosquitoes which afterwards proved to have moderate to few numbers of gland sporozoites either produced no "takes" or the infection developed by the 10th or 12th day instead of the normal 6th day. He concludes that it is probable that the minimal dosage had delayed the appearance of infection.

Martini (1931) cites two cases of malaria of prolonged incubation, one of which is frankly an experimental inoculation from mosquito biting and the other relates to the infection in his own person, reacting to attacks of mosquitoes in a highly malarious zone. This report is emphasized by Martini in the following, taken from his notes:

To begin with, the question of relapses or reinfection does not exist here as the observation can be vouched for, having been drawn from experiences in Hamburg, Germany. Therefore, the conclusions may be more accurate than if made in a country where malaria abounds. One, an experimental inoculation, and the other, equivalent to it, ran their natural courses, showing the picture of protracted latency. In case no. 1 the technical assistant in Martini's laboratory in Hamburg allowed an infected *Anopheles maculipennis* to bite her on June 1, 1927. She had never been exposed to malaria previously and remained continuously in the city of Hamburg during the entire period of the observation. The blood, on repeated examinations, remained negative during the observed period. On May 29, 1928, the experimental subject had a chill and fever, which was repeated on two other occasions before June 2, 1928. Microscopic examination showed numerous *vivax* parasites, fully 12 months following the experimental bite.

In his own case, Martini offers as evidence (however circumstantial) of protracted latency, attacks by mosquitoes in the Pontine Marshes in July 1930, which culminated in a chain of clinical manifestations in a subacute manner over a period of 10 months. Frequent blood examinations were made during the summer, fall, and winter, and not until May 1931 were tertian rings and gametocytes found in the blood. At that time typical malarial paroxysms occurred.

The only American reference found on the subject of experimental protracted incubation is that of Boyd, Kitchen, and Muench (1936). Here, 85 and 97 days are cited in two instances of experimental inoculations in malaria therapy as the period elapsing between inoculation and the first detection of parasites. The remaining references were based on epidemiological or circumstantial data. An example of this

may be taken from Deaderick (1916), who states that the latent stage of chronic malaria resembles in some respects a period of incubation. In fact, the cases reported with unduly long stages of incubation are doubtless nothing but latent stages of the chronic disease. During the latent stage, parasites may or may not be found in the peripheral blood.

Colonel Craig (1909) cites instances in his own experiences and those of his colleagues of the United States Army which indicate that an incubation period after natural infection is not generally accurately recorded and can be determined only in a very small proportion of cases. He states that instances do occur in which the incubation is greatly prolonged and quotes Sternberg in the instance of certain sailors who were infected while their ship lay in a malarious port. They developed the disease, one 48 days and the other 184 days, after leaving the port.

Another instance in his own experience reported on August 18, 1899, concerns a United States Army surgeon, who was exposed to malaria in Habana, Cuba, and demonstrated an incubation period of at least 7 months. Craig mentions two other instances, of United States Army officers stationed in the Philippines who, as a result of exposure, developed malaria 1 and 4 months, respectively, after returning to the United States.

Colonel Craig states that the cause of this variation may be sought in the number of sporozoites inoculated by the mosquito, the resistance of the individual inoculated, the character of the sporozoites as regards infectivity, and the natural conditions favoring the development of the plasmodia within the infected individual. He says: "Certain it is that in a large proportion of the cases presenting long periods of incubation, the theory first advocated by Thayer is true; namely, that while no symptoms are produced, the parasites multiply and perform their life cycle in small numbers."

DISCUSSION

It is stated by James and Shute (1936) that, with benign tertian infections, a protracted incubation can be effected by giving 0.6 g atebryn or 0.08 g plasmochin the day before and the day after mosquito application, irrespective of the number of bites. This, I presume, may be compared with attenuated virus or virulence of reduced potency.

Whether or not a self-aborted attack develops into latency of the protracted kind remains to be proved. The experience of the British Ministry of Health laboratory workers and that indicated by Martini in the account of his own infection suggest a parallel in a mosquito culture case recently observed at our field laboratory. In 16 days after the mosquito material had been injected, a clinical elevation of

temperature was manifested, which disappeared within 48 hours. Parasites could not be demonstrated. Are these latent cases in benign tertian due to small doses of sporozoites as suggested by Swellengrebel, Christophers, and James and Shute? If only one mosquito (lightly infected) bites a patient, the first attack is often 9 months delayed.

It is conjectural whether, in these artificial protracted periods of incubation, there follows the destruction of most, but not all of the injected parasites, and whether those which survive produce the latent attack.

It is stated by Christophers (1934) that Shute has demonstrated that an anopheline mosquito may still harbor sporozoites in its salivary glands after it has had at least 30 applications in biting a mammalian host. It is plausible, therefore, that in the fall of the year, or the prehibernation period, a mosquito carrier, though in a depleted condition, accounts for malaria transmission with a sequel of latency. This is generally not recognized.

It may be inferred from the experimental evidence advanced that the infection with malaria blood during autumn and winter, causing malarial symptoms after an incubation period of the usual length, might disprove the hypothesis of protracted incubation; but it has been shown by James and Shute that induced malaria through injection of blood cannot be compared with the natural insect transmission. It is regarded as possible that some of our recorded failures in insect biting might have resulted in protracted incubation if left uninterrupted; but on account of the attitude (quite proper) of the psychiatrist, who wishes his patients to respond to malaria therapy at the earliest occasion, the injection of malarious blood as a substitute is insisted upon. This procedure, of course, militates against ascertaining the subsequent history of the incubation period, which might contribute some light on the question of latency.

We might mention, in the realm of speculation, as another one of the principles involved in incubation periods of a protracted nature, the important matter of hibernation of infectivity during the colder months in southern endemic areas.

It is still unsettled as to the practicability of hibernation of malaria organisms in the mosquitoes' salivary glands. This is a point which has always remained unsettled since my own work in 1915 in the Mississippi Valley, although the work of King shows, at least theoretically, the possibility of survival of the sporozoite in the salivary glands of mosquitoes when exposed to short periods of cold.

The work of Boyd and Stratman-Thomas contributes a new light on the character of the motility of the sporozoite. It is not satisfactory evidence to claim viability for the organisms carried by the mosquito only by the demonstration of motility of these forms; one

must actually prove it through the inoculation of human subjects either through mosquito biting or with the dissected-out sporozoites.

Another point which is involved in our hypothetical discussion is the dosage of sporozoites. However, this, I am certain, will be predicated on the quality (potency) of the individual organisms. We shall, in the future, have to formulate a new interpretation of virulence and potency, as far as malaria insect carriage is concerned, besides the quality of motility and abundance of gland sporozoites as a measure of viability of malaria organisms.

Another consideration that may enter into the picture is that it has been the European and not the American strains in which the protracted incubation periods have been recorded. This suggests that either this phenomenon is a strain characteristic or such manifestations in American strains have been overlooked.

Certain it is that, as far as malaria therapy is concerned, a strain of malaria which offers incubation of this great length would not commend itself to the psychiatrist who is interested in the immediate benefits accruing from clinical malaria.

It is interesting to note regarding the strain of malaria used for making the suspensions for shipment from England, provided some years previously, that several instances of protracted incubation occurred in patients reacting to mosquito applications. To anticipate a logical query which may arise, transfer of blood from these cases did not occasion an unusual incubation period.

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OCCUPATIONAL AND ENVIRONMENTAL ANALYSIS OF THE CEMENT, CLAY, AND POTTERY INDUSTRIES ¹

Any program undertaken for preventing occupational diseases presupposes a knowledge of the problems which must be solved. Attention must be given to every occupation in order to uncover potential hazards. This requires an accurate knowledge of the occu-

¹ By R. R. Sayers, J. M. Dalla Valle, and S. G. Bloomfield. *Public Health Bulletin No. 238, Govt. Printing Office, Wash., D. C., September 1937.*

pational environment and the activities undertaken by each worker where hazards are found to exist. The lack of such basic and vital information has done much to retard the progress of industrial hygiene.

Public Health Bulletin No. 238, recently issued by the Public Health Service, is the outcome of industrial-hygiene surveys undertaken by the Occupational Morbidity and Mortality Study, part of the National Health Survey, and by industrial-hygiene divisions recently organized in several States by the Public Health Service. The purpose of these surveys was to determine in a large group of industries all occupations and their associated environmental exposures. In this way it was possible, following the method outlined by Bloomfield, Scott, and Sayers, and referred to in Public Health Bulletin No. 216 (1934), to uncover all potential health hazards.

The bulletin comprises an occupational and environmental analysis of the portland-cement industry, the clay industry (including brick, tile, and sewer-pipe departments), and the pottery industry. There is given a general outline of each industry, a flow sheet, and a tabular arrangement of all occupations. The latter lists the departments in which these occupations are to be found, the materials and exposure associated with each occupation, and a brief description of the operations involved. Finally, there is included a list of occupations by department.

The data presented in the bulletin are valuable to State departments of industrial hygiene, to casualty-insurance companies, and to other agencies which are interested in the environment of the worker and its effect upon health. The information is likewise useful in the event it is desired to make any extensive health studies of a given industry, since the bulletin presents in a comprehensive way all qualitative material which it is necessary to have available for such purposes.

The bulletin is designed to indicate the manner in which the material collected in the course of industrial-hygiene surveys may be analyzed. It is hoped that bulletins covering other industries may be issued from time to time.

STATE AND INSULAR HEALTH AUTHORITIES, 1937

DIRECTORY, WITH DATA AS TO APPROPRIATIONS AND PUBLICATIONS

Directories of the State and insular health authorities of the United States for each year from 1912 to 1936, except 1932, have been published in the PUBLIC HEALTH REPORTS and reprinted as separates¹ for the information of health officers and others interested in public health activities. The present directory (1937), like those previously issued, has been compiled from information furnished by the respective State and insular health officers, and includes data as to appropriations and publications.²

Where an officer has been reported to be a "whole-time" health officer, that fact is indicated by an asterisk (*). For this purpose a "whole-time" health officer is defined as "one who does not engage in the practice of medicine or in any other business but devotes all of his time to official duties."

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¹ Reprints nos. 83, 123, 190, 268, 344, 405, 488, 544, 605, 706, 775, 871, 949, 1043, 1106, 1188, 1254, 1334, 1425, 1522, 1604, 1675, 1724, and 1779, from the PUBLIC HEALTH REPORTS.

² While the information presented in this directory has been furnished recently by the State and insular health authorities, it does not include, for some of the States, new administrative divisions or bureaus that have been established as a result of grants in aid under the Social Security Act, such as divisions of industrial hygiene, maternal and child welfare, and special divisions under communicable disease control (venereal diseases, malaria, tuberculosis).

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 - *C. A. Abele, Ch. E., director, Montgomery.
 - *H. J. Thrasher, Huntsville.
 - *F. H. Downs, B. S. in D. H., Montgomery.

Bureau of vital statistics:

- *Leonard V. Phelps, S. B. in P. H., Montgomery.
- Appropriation for fiscal year ending September 30, 1937:
 Annual appropriation for all health work, including county organization, and exclusive of State subsidy to counties for maintenance of tuberculosis sanatoria, \$430,000. (Subject to proration on basis of available revenue coming into the general fund.)

ALASKA DEPARTMENT OF HEALTH

Executive health officer:

Walter W. Council, M. D., commissioner of health, Juneau.

Assistant commissioners of health:

- A. D. Haverstock, M. D., Seward.
 - Thomas Morcom, M. D., Nome.
 - Floyd B. Gillespie, M. D., Fairbanks.
- Appropriation for 1937-39, \$34,350.

ARIZONA STATE BOARD OF HEALTH

State board of health:

- R. C. Stanford, Governor, president, Phoenix.
- Joe Conway, vice president, Phoenix.
- Coit I. Hughes, M. D., secretary, Phoenix.

Administrative office:

- Coit I. Hughes, M. D., State superintendent of public health, State registrar of vital statistics.
- *Alfred R. Cheever, Jr., secretary.
- *W. E. Harrell, auditor.
- *Fred C. Ruppelius, statistician.

State laboratory:

- *Robert A. Green, director, Tucson.
- *Marion Stroud, bacteriologist, Phoenix.

Division of sanitary engineering:

- *F. C. Roberts, Jr.

Division of maternal and child health:

- *Jack B. Eason, M. D.

Division of local health administration:

- *J. D. Dunshee, M. D.

County health units:

- *R. B. Dufree, M. D., director, Cochise County.
- *G. F. Manning, M. D., director, Coconino County.

- *L. H. Howard, M. D., director, Pima County.

Appropriations, year ending June 30, 1938:

Board of health.....	\$17, 824
Child hygiene.....	20, 050
State laboratory.....	11, 020

ARKANSAS STATE BOARD OF HEALTH

Board of health:

- F. O. Mahoney, M. D., president, El Dorado.
- W. H. Hodges, M. D., Malvern.
- Thomas Wilson, M. D., Wynne.
- J. G. Gladden, M. D., Harrison.
- E. D. McKnight, M. D., Brinkley.
- L. D. Duncan, M. D., Waldron.
- M. E. McCaskill, M. D., Little Rock.

Executive health officer:

- *Wm. B. Grayson, M. D., State health officer, Little Rock.

Bureau of vital statistics:

- *Mrs. J. B. Collie, statistician, Little Rock.
- *J. C. Smalley, field agent, Little Rock.
- *Edwin H. Boysen, field agent, Little Rock.

Hygienic laboratory:

- *H. V. Stewart, associate director, Little Rock.
- *Mildred M. Moss, bacteriologist, Little Rock.
- *Mildred S. Fetherree, M. D., bacteriologist, Little Rock.
- *R. E. Byrd, water chemist, Little Rock.
-, serologist.

Bureau of sanitary engineering:

- *F. L. McDonald, E. E., chief sanitary engineer, Little Rock.
- *Walter A. Reinman, C. E., assistant engineer, Little Rock.
- *James P. Slater, director, division of community sanitation.
- *D. Webster Jones, B. S. A., director of milk control, Little Rock.

Bureau of local health service:

- *T. T. Ross, M. D., M. P. H., assistant State health officer, director, Little Rock.
- *W. Myers Smith, M. D., M. P. H., director, division of maternal and child health, Little Rock.
- *Margaret S. Vaughan, R. N., supervisor of public health nursing, Little Rock.
- *Mattie Neely, R. N., chief consultant nurse, division of maternal and child health, Little Rock.
- *A. M. Washburn, M. D., M. P. H., director of communicable disease control, Little Rock.
- *D. W. Fulmer, M. D., M. P. H., director, subdivision of malaria control, Little Rock.
- *S. L. Davies, C. E., sanitary engineer, subdivision of malaria control, Little Rock.

....., entomologist, subdivision of malaria control.

....., director, subdivision of tuberculosis control.

*Gale Morris, accountant.

Training center, Morrilton:

- *W. P. Scarlett, M. D., M. P. H., director.
- *John M. Smith, M. D., assistant director.

Appropriation for biennial period ending June 30, 1939:

Executive salary and miscellaneous.....	\$19, 800
Bureau of vital statistics.....	34, 200
Registrars' fees.....	31, 000
	<hr/>
Bureau of sanitary engineering.....	65, 200
Hygienic laboratory.....	18, 600
Bureau of local health service.....	19, 940
	<hr/>
	360, 000

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Board of public health:

Howard Morrow, M. D., president, San Francisco.

Edward M. Palette, M. D., vice president, Los Angeles.

Walter M. Dickie, M. D., director of public health, Sacramento.

- Roy A. Terry, M. D., Long Beach.
- William R. P. Clark, M. D., San Francisco.
- George H. Kress, M. D., Los Angeles.
- Gustave Wilson, M. D., Sacramento.

Department of public health:

*Walter M. Dickie, M. D., director of public health, Sacramento.

Bureau of epidemiology:

- *Harlin L. Wynns, M. D., chief, San Francisco.
- *Ida May Stevens, supervising morbidity statistician.
- *Gavin J. Telfer, M. D., epidemiologist, Los Angeles.

Bureau of sanitary inspections:

*Edward T. Ross, chief, Sacramento.

Bureau of vital statistics:

*Marie B. Stringer, chief, Sacramento.

Bureau of registration nurses:

*Helen F. Hansen, chief, Sacramento.

Bureau of tuberculosis:

*Edyth L. M. Tate-Thompson, chief, Sacramento.

Bureau of venereal diseases:

*Malcolm H. Merrill, M. D., chief, Sacramento.

Bureau of industrial hygiene:

*John P. Russel, M. D., C. P. H., chief, Sacramento.

Bureau of county health work:
*George M. Uhl, M. D., C. P. H., chief, Sacramento.

Bureau of food and drug inspections:
*M. P. Duffy, chief.

Division of laboratories:
*W. H. Kellogg, M. D., chief, Berkeley.

Bureau of sanitary engineering:
*C. G. Gillespie, C. E., chief, Berkeley.

Bureau of child hygiene:
*Ellen S. Stadtmuller, M. D., chief, San Francisco.

Bureau of cannery inspections:
M. P. Duffy, chief.

Appropriations available July 1, 1937, for biennial period ending June 30, 1939 (89th and 90th years):
Administration:

For support, department of public health..... \$427,300

Bureau of cannery inspection:
For support (payable from cannery-inspection funds)..... 336,320

Bureau of registration of nurses:
For support (payable from nurses registration funds)..... 49,020

Bureau of food and drug inspections:
Alcohol beverage control fund..... 60,000

Tuberculosis bureau:
Allotment for support, included in item "For support, department of public health", \$20,230.

For subsidies..... 1,400,000

Total..... 2,272,640

Other sources of revenue:

Fees for registration of nurses, \$10 each. (Fees for California graduate nurses, \$5 only.)

Renewal of registration certificates, \$1 each per year.

Licensing of cold-storage warehouses, rated according to capacity, for credit to general fund.

Fines for violation of pure food and drugs acts, for credit to general fund.

Fees for licenses, \$50 each, and contributions, for credit to bureau of cannery inspection.

Fees for searches and certified copies of records, for credit to general fund.

Fees for inspection and registration of aviaries, \$5 each.

Fees for inspection of clinics and dispensaries, \$20 each.

Publications issued by health department:

Biennial report.

Weekly bulletin.

Special bulletins.

General health laws.

COLORADO STATE DIVISION OF PUBLIC HEALTH

State board of health:

Paul J. Connor, M. D., president, Denver.

William P. Gasser, M. D., vice president, Loveland.

R. L. Cleere, M. D., C. P. H., secretary and executive officer, Denver.

G. W. Bumpus, D. O., Denver.

N. M. Burnett, M. D., Lamar.

Beh Beshoar, M. D., Trinidad.

C. A. Davlin, M. D., Alamosa.

Frank Onufrock, Colorado Springs.

H. C. Dolph, D. D. S., Denver.

Division of administration:

*R. L. Cleere, M. D., C. P. H., secretary and executive officer, Denver.

Division of rural health work and epidemiology:

*James S. Cullyford, M. D., C. P. H., director.

Division of social hygiene:

*R. L. Cleere, M. D., C. P. H., secretary and executive officer, Denver.

Division of plumbing:

*Irving A. Fuller, chief inspector.

Division of bacteriology:

*W. C. Mitchell, M. D., bacteriologist.

Division of sanitary engineering:

*Benjamin V. Howe, sanitary engineer.

Division of vital statistics:

*Frank S. Morrison, LL. B., director.

Division of food and drugs:

*Walter W. Lear, commissioner.

Division of crippled children:

*Vera H. Jones, M. D., director.

Division of maternal and child health:

*Vera H. Jones, M. D., director.

Division of public health nursing:

*Ruth E. Phillips, R. N., supervisor.

Appropriations for fiscal years ending June 30, 1938 and 1939:

	1938	1939
Salaries.....	\$71,367	\$71,547
Laboratory equipment and supplies.....	1,000	1,000
Printing.....	2,850	2,850
Traveling expenses.....	16,013	16,013
Veneral disease.....	5,500	5,500
Incidental.....	4,065	4,065
Physicians' and surgeons' fees and hospitalization.....	31,205	31,205
Total.....	132,000	132,180

CONNECTICUT DEPARTMENT OF HEALTH

Public health council:

C. E. A. Winslow, D. P. H.

James W. Knox.

James A. Newlands.

David R. Lyman, M. D.

Robert A. Cairns, C. E.

Joseph M. Ganey, M. D.

Executive health officer:

*Stanley H. Osborn, M. D., C. P. H., commissioner of health, Hartford.

Bureau of preventable diseases:

*Millard Knowlton, M. D., C. P. H., director.

Bureau of vital statistics:

*William C. Welling, director.

Bureau of public-health nursing:

..... director.

Bureau of child hygiene:

*Martha L. Clifford, M. D., director.

Bureau of public-health instruction:

*Elizabeth C. Nickerson, C. P. H.

Bureau of laboratories:

*F. Lee Mickle, director.

Bureau of sanitary engineering:

*Warren J. Scott, director.

Bureau of occupational diseases:

*Albert S. Gray, M. D., director.

Bureau of venereal diseases:

*Henry P. Talbot, M. D., M. P. H., director.

Bureau of mental hygiene:

*James M. Cunningham, M. D., director.

Division of mouth hygiene:

*Franklin M. Erlenbach, D. M. D., chief.

Division of medical registration:

*Ruth H. Monroe, chief.

Division of supplies:

*Lawrence A. Fagan, chief.

Division of local health administration:

*Franklin M. Foote, M. D., chief.

Appropriation for fiscal period ending June 30, 1939

(2 years), \$717,269.

Publications issued by health department:

Weekly bulletin.

Monthly bulletin.

Annual vital-statistics report.

Annual report of State department of health.

Miscellaneous pamphlets.

DELAWARE STATE BOARD OF HEALTH

State board of health:

Stanley Worden, M. D., president, Dover.

Mrs. F. G. Tallman, vice president, Wilmington.

Mrs. Arthur Brewington, secretary, Delmar.

R. E. Ellegood, M. D., Wilmington.

Mrs. Charles Warner, Wilmington.

John F. Maguire, D. D. S., Wilmington.

Bruce Barnes, M. D., Seaford.

M. I. Handy, M. D., Wilmington.

Executive health officer:

*Arthur C. Jost, M. D., C. M., Dover.

Director of laboratory:
 *R. D. Herdman, Dover.
 Director of communicable disease control:
 *J. R. Beck, M. D., Dover.
 Director of maternal and child health:
 *Woodbridge E. Morris, M. D., Dover.
 Sanitary engineer:
 *R. C. Beckett, Dover.
 Superintendent of Brandywine Sanatorium:
 *L. D. Phillips, M. D., Marshallton.
 Superintendent of Edgewood Sanatorium:
 *Elizabeth Van Vranken, R. N., Marshallton.
 State supervisor of nurses:
 *Mrs. Kathryn Trent, R. N., Dover.
 State oral hygienist:
 *Miss Margaret Jeffreys, R. D. H., Dover.
 County unit officers:
 *J. R. Downes, M. D., New Castle County.
 *E. F. Smith, M. D., Kent County.
 *F. I. Hudson, M. D., Sussex County.

Appropriations for the fiscal year ending June 30, 1937:

General administration.....	\$87,300
Hygiene laboratory.....	10,850
Edgewood Sanatorium for colored tuberculous patients.....	35,000
Brandywine Sanatorium for white tuberculous patients.....	167,000
Dental hygiene.....	12,000
Total.....	312,150

Special construction at Brandywine Sanatorium..... 25,000

Publications:
 Annual report.
 Bulletins on health subjects.
 Weekly circular.

DISTRICT OF COLUMBIA HEALTH DEPARTMENT

Executive health officer:
 *George C. Ruhland, M. D., health officer, Washington.
 Assistant health officer:
 Daniel L. Sockinger, M. D., Washington.
 Chief clerk and deputy health officer:
 *Arthur G. Cole, Washington.
 Chief, Bureau of Preventable Diseases, and director, bacteriological laboratory:
 *James G. Cumming, M. D., Washington.
 Bacteriologist:
 *John E. Noble, Washington.
 Serologist:
 *Jesse P. Porch, D. V. M., Washington.
 Maternity welfare:
 J. Bay Jacobs, M. D., medical director.
 Bureau of Nursing:
 Mrs. Josephine Pittman Prescott, director.
 Bureau of tuberculosis:
 *A. Barklie Coulter, M. D., director.
 Chemist:
 *John B. Reed, Washington.
 Chief sanitary inspector:
 *J. Frank Butts, Washington.
 Director child-hygiene service:
 *Hugh J. Davis, M. D., Washington.
 Chief food inspector:
 *Reid R. Ashworth, D. V. S., Washington.
 Chief medical and sanitary inspector of schools:
 *Joseph A. Murphy, M. D., Washington.
 Chief, bureau of vital statistics:
 *Joseph B. Irvine, Washington.
 Director, bureau of maternal and child hygiene:
 *Ella Oppenheimer, M. D.
 Director, public health instruction:
 *Melvin P. Isaming, M. D.

Appropriations for the fiscal year ending June 30, 1938:

Salaries.....	\$217,600
Prevention of communicable diseases.....	43,830
Milk and food inspection and regulation.....	7,000
Dispensary service, including treatment of tuberculosis and venereal diseases.....	45,360
Maintaining a child hygiene service.....	25,000
Hygiene and sanitation, public schools.....	111,060
Laboratory service.....	7,890
Nursing service.....	143,440
Tuberculosis sanitaris.....	494,963

Appropriations for the fiscal year ending June 30, 1938—Continued,

Gallinger Hospital.....	\$678,480
Medical charities.....	155,000
Health Center.....	165,000
Miscellaneous.....	1,800
Total.....	2,098,533

Publications issued by health department:
 Weekly report by health department.
 Annual report of health officer.
 Monthly statement of average grade of milk and ice cream sold.

FLORIDA STATE BOARD OF HEALTH

Board of health:
 N. A. Baltzell, M. D., president, Marianna.
 A. Wm. Morrison, Pharmacist.
 Shaler Richardson, M. D., Jacksonville.
 Executive health officer:
 *W. A. McPhaul, M. D., State health officer, Jacksonville.
 Diagnostic laboratories:
 *Paul Eaton, M. D., D. P. H., director, Jacksonville.
 Bureau of vital statistics:
 *Edward M. L'Engle, M. D., director.
 Bureau of sanitation:
 *Fred A. Safay, director.
 Division of public health nursing:
 *Ruth E. Mettinger, R. N., director.
 Division of drug inspection:
 M. H. Doss, chief inspector, Jacksonville.
 Bureau of maternal and child health:
 R. N. Joyner, M. D., director.
 Bureau of county health work:
 A. B. McCreary, M. D., director.
 Bureau of epidemiology:
 Dan N. Cone, M. D., director.
 Appropriation for health department:
 One-half mill tax levied upon the assessable property of the State for the year ending June 30, 1936, and the same for the year ending June 30, 1937, but expenditures thereunder limited to \$225,000 for each fiscal year.
 Publications issued by health department:
 Pamphlets covering all phases of public health.
 Public health information disseminated through the weekly and daily papers of the State.
 Florida health notes.
 Annual reports.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

State Board of Health:
 Cleveland Thompson, M. D., Millen, First District.
 C. K. Sharp, M. D., Arlington, Second District.
 R. C. Ellis, Americus, Third District.
 M. M. Head, M. D., Zebulon, Fourth District.
 R. F. Maddox, Atlanta, Fifth District.
 A. R. Rozar, M. D., Macon, Sixth District.
 M. M. McCord, M. D., Rome, Seventh District.
 H. W. Clements, M. D., Adel, Eighth District.
 L. C. Allen, M. D., Hoeshton, Ninth District.
 W. A. Mulherin, M. D., Augusta, Tenth District.
 T. C. Marshall, Ph. G., State at large, Atlanta.
 W. T. Edmonds, State at large, Augusta.
 J. G. Williams, D. D. S., State at large, Atlanta.
 Paul McGee, D. D. S., State at large, Waycross.
 Executive health officer:
 *T. F. Abercrombie, M. D., director, Atlanta.
 *J. P. Bowdoin, M. D., assistant director.
 Division of venereal-disease control:
 *Joe P. Bowdoin, M. D., chief, Atlanta.
 Division of county health work:
 *Guy G. Lunsford, M. D., chief, Atlanta.
 Division of laboratories:
 *T. F. Sellers, M. D., chief, Atlanta.
 Division of sanitary engineering:
 *L. M. Clarkson, chief, Atlanta.
 Division of tuberculosis control:
 *H. C. Schenck, M. D., chief, Atlanta.
 Bureau of vital statistics:
 *Butler Toombs, chief, Atlanta.
 Division of child hygiene:
 *Joe P. Bowdoin, M. D., chief, Atlanta.

Division of epidemiology:

*C. D. Bowdoin, M. D., chief.

Division of accounting and purchasing:

*C. L. Tinsley, chief, Atlanta.

Appropriations for the fiscal years ending June 30,

1938, and June 30, 1939:

General appropriation.....	\$500,000
Scaled proportionately to State income.	

TERRITORY OF HAWAII BOARD OF HEALTH**Board of health:**

Clarence A. MacGregor, president, Honolulu.

S. B. Kemp, attorney general, Honolulu.

Guy C. Milnor, M. D., Honolulu.

Donald S. Bowman, Honolulu.

Edwin Lewis, Honolulu.

Robert M. Yates, Honolulu.

W. H. Wynn, M. D., Honolulu.

F. E. Trotter, M. D., Territorial commissioner of public health, Honolulu.

Executive health officer:

*F. E. Trotter, M. D., Territorial commissioner of public health, Honolulu.

Secretary:

*Florence S. Orr, Honolulu.

Health officer, island of Hawaii:

*Joseph S. Caceres, Hilo.

Health officer, island of Kauai:

A. M. Ecklund, M. D., Koloa.

Health officer, island of Maui:

*Laurence M. Wilg, M. D., Waialuku.

Tuberculosis bureau:

*C. Alvin Dougan, M. D., director, Honolulu.

Bureau of public health nursing:

*Mary Williams, director, Honolulu.

Bureau of communicable diseases:

*James R. Enright, M. D., director, Honolulu.

Bacteriologist, island of Oahu:

*Alison W. Street, Honolulu.

Bacteriologist (acting), island of Hawaii:

*Miss Inoyo Kojima, Hilo.

Bacteriologist, island of Maui:

Haliburton McCoy, M. D., Puunene.

Bacteriologist, island of Kauai:

A. M. Ecklund, M. D., Koloa.

Bacteriologist, island of Molokai:

Stanley Sakai, Kaunakakai.

Bureau of maternal and infant hygiene:

Frederick K. Lam, M. D., director, Honolulu.

Bureau of sanitation:

*S. W. Tay, director, Honolulu.

*Fred Schultz, division supervisor, Honolulu.

*Clifford H. Bowman, division supervisor, island of Hawaii, Hilo.

*R. C. Lane, division supervisor, island of Maui, Waialuku.

*A. P. Christian, division supervisor, island of Kauai, Lihue.

*Robert B. Pauole, sanitary inspector, Leeward Molokai, Kaunakakai.

Bureau of vital statistics:

*Miss M. H. Lemon, registrar general, Honolulu.

Bureau of pure food and drugs:

*M. B. Batros, director, Honolulu.

Territorial hospital:

*A. B. Kroll, superintendent, Kaneohe, Oahu.

*R. D. Kepner, M. D., acting medical director, Kaneohe, Oahu.

Appropriations, biennium 1937-39:**Board of health—general administration:**

Personal services.....	\$58,518
Other current expenses.....	7,500
Equipment.....	3,750
	<hr/>
	69,768

Bureau of vital statistics:

Personal services.....	25,018
Other current expenses.....	7,500
Equipment.....	750
	<hr/>
	33,268

Tuberculosis bureau:

Personal services.....	23,089
Other current expenses.....	10,000
Equipment.....	300
	<hr/>
	33,389

Appropriations, biennium 1937-39—Con.**Tuberculosis—private hospitals:**

Appropriation made by 1937 legislature direct to institutions. Funds no longer under control of board of health.

Bureau of public health nursing:

Personal services.....	\$206,777
Other current expenses.....	35,500
Equipment.....	10,450
	<hr/>
	252,727

Plague campaign:

Personal services.....	74,610
Other current expenses.....	31,000
Equipment.....	8,091
Structures and permanent improvements to land.....	9,000
	<hr/>
	122,701

Bureau of communicable diseases:

Personal services.....	39,185
Other current expenses.....	24,000
Equipment.....	2,532
	<hr/>
	65,717

Bureau of maternal and infant hygiene:

Personal services.....	11,600
Other current expenses.....	22,550
Equipment.....	150
	<hr/>
	34,300

Bureau of pure food and drugs:

Personal services.....	18,534
Other current expenses.....	2,100
Equipment.....	1,000
	<hr/>
	21,634

Board of examiners:

Personal services.....	240
Other current expenses.....	300
	<hr/>
	540

Bureau of sanitation:

Personal services.....	139,727
Other current expenses.....	18,838
Equipment.....	11,800
	<hr/>
	170,365

Government physicians:

Personal services.....	86,403
Other current expenses.....	7,500
	<hr/>
	93,903

Territorial hospital (insane):

Personal services.....	468,805
Other current expenses.....	270,960
Equipment.....	24,895
Structures and permanent improvements to land.....	1,300
	<hr/>
	795,960

Total.....1,694,272

IDAHO DEPARTMENT OF PUBLIC WELFARE**DIVISION OF PUBLIC HEALTH****Executive health officer:**

*James W. Hawkins, M. D., director of public health.

Division of local health administration:

*L. C. Krotcher, M. D., director.

*Kathryn McCabe, R. N., P. H. N., supervising nurse.

Division of maternal and child health and crippled children:

*H. L. McMartin, M. D., director.

*Gladys Bell, assistant director.

Division of sanitary engineering and chemistry:

- *W. V. Leonard, M. E., director.
- *James M. Welsh, sanitary inspector.
- *C. H. Watson, sanitary inspector.

Division of bacteriological and hygienic laboratories

- *L. J. Peterson, director.
- *A. W. Klotz, assistant director.
- *Edward G. Hoffman, laboratory technician.
- *Paul C. Ward, C. E., field technician.

Division of vital statistics:

- *Pearl Dillingham, registrar.

Appropriation for biennial period ending December 31, 1938:

Salaries of regular officers and employees.....	\$41,328
Wages to extra help.....	400
Expert and special.....	1,200
	<hr/>
	42,928

Services other than personal.....	18,000
Supplies.....	5,780
Equipment.....	800
Rents, fixed charges.....	3,424
	<hr/>
	28,004

Total for salaries and wages and all other expenses.....	70,932
Special appropriation—industrial hygiene.....	5,000

Appropriation for hospitalization of tuberculous patients:

Fixed charges.....	\$51,400
Personal services.....	3,600
	<hr/>
	55,000

Special grant from other sources of revenue in the State for crippled children (special grant for fiscal year ending June 30, 1938).....	24,000
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Other sources of revenue:

Aid through Social Security for public health work, maternal and child health, and crippled children.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Board of public health advisors:

- Clifford U. Collins, M. D., chairman.
- E. J. Doering, M. D.
- Samuel E. Munson, M. D.
- Maurice Rubel, M. D.

Executive health officer:

- *A. C. Baxter, M. D., acting director of public health, Springfield.

Assistant director of public health:

- *A. C. Baxter, M. D.

Division of sanitary engineering:

- *Clarence W. Klassen, C. E., chief sanitary engineer.

Division of communicable diseases:

- *J. J. McShane, M. D., D. P. H., chief.

Division of child hygiene and public-health nursing:

- *Grace S. Wightman, M. D., chief.

Division of tuberculosis:

- *A. C. Baxter, M. D., acting chief.

Division of laboratories:

- *Howard J. Shaughnessy, Ph. D., chief.

Division of vital statistics:

- *R. E. Woodruff, M. D., acting registrar.

Division of public-health instruction:

- *Baxter K. Richardson, chief.

Division of hotel and lodging-house inspection:

_____, superintendent.

Appropriations for biennial period ending June 30, 1939:

(Approximate)

Salaries.....	\$858,840
Salaries State officers.....	27,800
Office expenses.....	26,202
Traveling expenses.....	149,600
Operation.....	440,000
Repairs and equipment.....	40,032
Contingent.....	65,000
Printing.....	60,000

Appropriations for biennial period ending June 30, 1939—Continued.

(Approximate)

Postage.....	\$28,000
Sanitary water-board law.....	30,000
Emergency.....	25,000
Slum areas.....	40,000
Marriage laws.....	50,000
	<hr/>
Total.....	1,840,474

Publications issued by health department:

- Illinois Health Messenger (byweekly).
- Weekly statistical bulletin for health officers.
- Quarterlies on sanitation of water, milk, swimming pools, sewage disposal.
- Newspaper releases and manuscript of radio broadcasts.
- Educational health circulars.

INDIANA DEPARTMENT OF COMMERCE AND INDUSTRIES, STATE BOARD OF HEALTH

Board of health:

- J. C. Glackman, M. D., president, Rockport.
- Edmund Van Buskirk, M. D., Fort Wayne.
- Ernest Rupel, M. D., Indianapolis.
- William Wise, M. D., Indianapolis.
- Verne K. Harvey, M. D., secretary, Indianapolis.

Executive health officer:

- *Verne K. Harvey, M. D., C. P. H. director, Indianapolis.

Assistant director:

- *W. H. Frazier, Indianapolis.

Bureau of physical and health education:

- Thurman B. Rice, M. D., chief, Indianapolis.

Bureau of maternal and child health:

- Howard B. Mettel, M. D., chief, Indianapolis.

Bacteriological laboratories:

- Clyde G. Culbertson, M. D., chief, Indianapolis.

Bureau of local health administration:

- *John W. Ferree, M. D., chief, Indianapolis.

Epidemiologist:

- *J. W. Jackson, M. D., Indianapolis.

Bureau of public health nursing:

- *Eva F. MacDougall, R. N., chief, Indianapolis.

Bureau of food and drugs:

- *Harold V. Darnell, Ph. C., chief, Indianapolis.

Bureau of sanitary engineering:

- *B. A. Poole, chief engineer, Indianapolis.

Bureau of weights and measures:

- *Rollin E. Meek, chief, Indianapolis.

Bureau of dairy products:

- *John Taylor, chief, Indianapolis.

Bureau of vital statistics:

- *H. M. Wright, chief, Indianapolis.

State investigator:

- *Leo J. Rail, Indianapolis.

Auditor:

- *D. S. McCready, Indianapolis.

Appropriation for fiscal year beginning July 1, 1937, and ending June 30, 1938, \$233,500.

IOWA STATE DEPARTMENT OF HEALTH

EX OFFICIO

- Nelson G. Kraschel, governor, Des Moines.
- Robert E. O'Brian, secretary of State, Des Moines.
- Leo J. Wegman, treasurer of State, Des Moines.
- Thomas Curran, secretary of agriculture, Des Moines.
- Walter L. Bierring, M. D., State commissioner of health, Des Moines.

APPOINTIVE BY GOVERNOR

- Edward M. Myers, M. D., chairman, Boone.
- Herbert E. Story, M. D., secretary, Osceola.
- W. J. Connell, Hawkeye.
- Walter A. Sternberg, M. D., Mt. Pleasant.
- Charles E. Irwin, M. D., Marshalltown.
- Executive health officer:**
- *Walter L. Bierring, M. D. commissioner of health, Des Moines.
- *M. F. Haygood, M. D., director of local health services, Des Moines.

Division of communicable diseases and epidemiology:

*Carl F. Jordan, M. D., C. P. H., director, Des Moines.

Division of child health and health education:

*J. H. Kinnaman, M. D., director, Des Moines.

Division of public health engineering:

*A. H. Wiesters, director, Des Moines.

State hygienic laboratories:

*M. E. Barnes, M. D., director, Iowa City.

Division of public health nursing:

*Edith S. Countryman, R. N., director, Des Moines.

Division of vital statistics:

Division of licensure and registration:

*H. W. Greff, director, Des Moines.

Division of law enforcement:

*Herman B. Carlson, director, Des Moines.

Division of barber inspection:

*William B. Wilson, director, Des Moines.

Division of cosmetology inspection:

*Helen Blake, executive secretary, Des Moines.

Housing work is carried on by engineering division.

Medical, dental, optometry, cosmetology, chiropractic, osteopathy, embalming, podiatry, and barber examining boards are combined in the State Department of Health.

Executive secretary:

Albert F. Vogt, Des Moines.

Appropriations for fiscal year ending June 30, 1938:

Central administration.....	\$24,570
Public health nursing division.....	4,950
Child health and health education.....	6,300
Preventable diseases (general).....	5,820
Preventable diseases (venereal disease control).....	40,000
Vital statistics.....	7,600
Public health engineering.....	18,800
Licensure and registration.....	7,540
	<hr/>
	115,580

Examining boards:

Medical, dental, osteopathic, chiropractic, embalmers, optometry, cosmetology, and barbers..... 38,760

154,340

KANSAS STATE BOARD OF HEALTH

Board of health:

George I. Thacher, M. D., president, Waterville.

H. L. Aldrich, M. D., Caney.

W. C. Lathrop, M. D., Norton.

A. B. Mitchell, LL. B., Lawrence.

A. J. Rettenmaier, M. D., Kansas City.

W. J. Eilerts, M. D., Wichita.

J. L. Lattimore, M. D., Topeka.

Alfred O'Donnell, M. D., Ellsworth.

Jos. W. Spearling, M. D., Cimarron.

R. T. Nichols, M. D., Hiawatha.

Executive health officer:

*F. P. Helm, M. D., secretary and executive health officer, Topeka.

Division of vital statistics:

*Minnie Fleming, acting state registrar, Topeka.

Division of preventable diseases:

E. K. Musson, M. D.

*C. H. Kinnaman, M. D., epidemiologist, Topeka.

*R. H. Riedel, M. D., venereal diseases, Topeka.

*Clifton F. Hall, M. D., tuberculosis, Topeka.

Division of food and drugs:

*Thos. I. Dalton, Ph. C., assistant chief food and drug inspector, Topeka.

Division of child hygiene:

*H. R. Ross, M. D., director, Topeka.

R. F. Boyd, M. D., assistant director.

Division of sanitation:

Earnest Boyce, chief engineer, Lawrence.

Division of public health education:

*F. P. Helm, M. D., director, Topeka.

*Bertha H. Campbell, assistant director.

Water and sewage laboratories at Kansas University:

Earnest Boyce, director.

Food laboratory at Kansas University:

H. P. Cady, director.

Drug laboratory at Kansas University:

L. D. Havenhill, director of drug analysis, Lawrence.

Food laboratory at Kansas Agricultural College:

H. H. King, director of food analysis, Manhattan.

Public health laboratory, Topeka:

*Chas. A. Hunter, Ph. D., director, Topeka.

Appropriations for year ending June 30, 1938:

Executive.....	\$5,020
Division of communicable diseases.....	13,304
Division of food and drugs.....	11,700
Division of child hygiene.....	8,470
Division of research and investigation work.....	6,000
Public health laboratory.....	10,000
Division of sanitation.....	3,000
Board members.....	1,000
	<hr/>
Total.....	58,496

Other sources of revenue:

Marriage fees, approximately \$21,097.

Water and ice analyses fees, approximately \$14,000.

Publications issued by health department:

Biennial report.

Weekly morbidity report.

KENTUCKY STATE DEPARTMENT OF HEALTH

Department of health:

E. M. Howard, M. D., president, Harlan.

George S. Coon, M. D., Louisville.

A. T. McCormack, M. D., secretary, Louisville.

J. Watts Stovall, M. D., Grayson.

John H. Blackburn, M. D., Bowling Green.

W. H. Fuller, M. D., Mayfield.

E. L. Gates, M. D., Greenville.

C. J. Johnson, D. O., Louisville.

Executive officer:

*A. T. McCormack, M. D., D. P. H., State health commissioner, Louisville.

Bureau of county health work:

*P. E. Blackerby, M. D., assistant State health commissioner, Louisville.

*V. A. Stille, M. D., field director, Benton.

*W. F. Lamb, M. D., field director, Russellville.

*D. A. Reekie, M. D., field director, Louisville.

*Juanita Jennings, M. D., field director, Louisville.

Bureau of vital statistics:

*J. F. Blackerby, director, Louisville.

Bureau of bacteriology:

*Lillian H. South, M. D., director, Louisville.

Bureau of sanitary engineering:

*F. C. Dugan, C. E., director, Louisville.

Bureau of foods, drugs, and hotels:

*Sarah Vance Dugan, director, Louisville.

Bureau of venereal diseases:

Bureau of public health nursing:

*Margaret L. East, R. N., director, Louisville.

Bureau of maternal and child health:

*C. B. Crittenden, M. D., acting director, Louisville.

Bureau of prevention of trachoma and blindness:

United States Trachoma Hospital:

*Robert Sory, M. D., medical officer in charge.

Bureau of budget:

*Elva V. Grant, director, Louisville.

Bureau of epidemiology:

*F. W. Caudill, M. D., director, Louisville.

Bureau of tuberculosis:

*John B. Floyd, M. D., director, Louisville.

State tuberculosis sanatorium:

*Paul A. Turner, M. D., director and superintendent, Louisville.

Bureau of dental health:

J. F. Owen, D. D. S., director, Lexington.

Bureau of public health education:

*John W. Kelly, director.

*Mayme Sullivan, chief clerk.

Bureau of medical registration:

*John G. South, M. D., director, Louisville.

Appropriations for fiscal year ending June 30, 1938:

Central administration for all departments.....	\$157,500
Full-time county health departments.....	285,170
State tuberculosis sanatorium.....	44,000
Total.....	486,670

LOUISIANA DEPARTMENT OF HEALTH

State board of health:

- * J. A. O'Hara, M. D., president, New Orleans.
- S. E. Graham, M. D., Melville.
- S. J. Couvillon, M. D., Moreauville.
- Jas. C. Sartor, M. D., Rayville.
- (Other members to be appointed.)
- Fannie B. Nelken, secretary.

Executive health officer:

- * J. A. O'Hara, M. D., president, State board of health, New Orleans.

Bacteriologist:

- * W. H. Seemann, M. D., New Orleans.

Registrar of vital statistics:

- * P. A. Kibbe, M. D., New Orleans.

Bureau of communicable diseases:

- C. I. Brown, M. D., New Orleans.

Bureau of public health administration:

- * R. W. Todd, M. D., director, New Orleans.

Sanitary engineer:

- * John H. O'Neill, New Orleans.

Analyst:

- * Cassius L. Clay, New Orleans.

Sanitary inspection:

- * Peter Rohrs, Jr., chief, New Orleans.

Auditor:

- * Phil Arras, New Orleans.

Appropriations for fiscal years:

1936-37.....	\$430,000
1937-38.....	430,000

Publications issued by health department:

- Quarterly bulletin.
- Biennial report.
- Miscellaneous leaflets.

MAINE DEPARTMENT OF HEALTH AND WELFARE

Advisory council of health and welfare:

- Miss Sally P. Moees, Bangor.
- George W. Lane, Jr., Auburn.
- Mrs. Helen C. Donahue, Portland.
- E. V. Call, M. D., Lewiston.
- Irving E. Pendleton, D. M. D., Lewiston.

Bureau of health:

- * George H. Coombs, M. D., director, Augusta.
- * Roscoe L. Mitchell, M. D., deputy director, Augusta.

Division of administration:

- * George H. Coombs, M. D., director, Augusta.

Division of communicable diseases:

- * Roscoe L. Mitchell, M. D., Augusta.

Division of laboratories:

- * A. H. Morrell, M. D., Augusta.
- Aroostook county branch laboratory: C. S. Kingsley.

Division of sanitary engineering:

- * Elmer W. Campbell, D. P. H., Augusta.

Division of vital statistics:

- * George H. Coombs, M. D., State registrar, Augusta.

Division of social hygiene:

- * George H. Coombs, M. D., director, Augusta.
- Benjamin B. Foster, M. D., consultant, Portland.
- Harrison J. Hunt, M. D., consultant, Bangor.

Division of public health nursing and child hygiene:

- * Edith L. Soule, R. N., director, Augusta.
- * Helen N. Kienzle, R. N., assistant director, Augusta.

Division of dental hygiene:

- * Dorothy Bryant, D. H., Augusta.

Division of crippled children:

- * Herbert R. Kobes, M. D., Augusta.

Division of maternal and child health:

- * Roscoe L. Mitchell, M. D., acting director, Augusta.

Health unions:

Cooperative health union:

- B. L. Arms, M. D., Farmington.
- Motbov health union (Milford, Old Town, Bradley, Orono, Veazie):
- Howard L. Jackson, M. D., Old Town.

District health officers:

- * J. L. Pepper, M. D., South Portland.
- * C. N. Stanhope, M. D., Dover-Foxcroft.
- * J. W. Loughlin, M. D., Rockland.
- * B. F. Porter, M. D., Caribou.
- * J. A. MacDonald, M. D., Machias.

Appropriations for fiscal year ending June 30, 1938:

Administration.....	\$60,500
District and local health officers.....	27,500
Veneal-disease control work.....	11,300
Maternity and child-welfare work.....	26,000
Branch State laboratory, Caribou.....	3,400
Aid for typhoid carriers.....	5,300
Infantile paralysis control.....	2,000
Pneumonia control.....	4,000
Total.....	140,000

Other sources of revenue:

- Census Bureau, Washington, D. C., and miscellaneous receipts, about \$2,000.
- License fees for camps, eating and lodging places, etc., about \$34,000 (estimated).

MARYLAND DEPARTMENT OF HEALTH

Board of health:

- Robert H. Riley, M. D., Dr. P. H., chairman, Baltimore.
- Thomas S. Cullen, M. D., Baltimore.
- Herbert R. O'Connor, attorney general, Baltimore.
- Joseph Irwin France, M. D., Port Deposit.
- Huntington Williams, M. D., Dr. P. H., Baltimore.
- Frederick A. Allner, C. E., Baltimore.
- Benjamin C. Perry, M. D., Bethesda.
- E. F. Kelly, Phar. D., Baltimore.
- George M. Anderson, D. D. S., Baltimore.

Executive health officer:

- * Robert H. Riley, M. D., Dr. P. H., director of health, Baltimore.

Division of personnel and accounts:

- * Walter N. Kirkman, chief, Baltimore.

Division of oral hygiene:

- * Richard C. Leonard, D. D. S., chief, Baltimore.

Division of legal administration:

- * J. Davis Donovan, LL. B., chief, Baltimore.

Committee on public health education:

- * Gertrude B. Knipp, secretary, Baltimore.

Bureau of communicable diseases:

- * Robert H. Riley, M. D., Dr. P. H., chief, Baltimore.
- * C. H. Halliday, M. D., epidemiologist, Baltimore.
- * C. W. G. Rohrer, M. D., Ph. D., diagnostician, Baltimore.

Bureau of vital statistics:

- * Arthur W. Hedrich, chief, Baltimore.

Food and drug commissioner:

- * A. L. Sullivan, chief, Baltimore.

Deputy food and drug commissioner:

- * R. L. Swain, Phar. D., LL. B.

Bureau of bacteriology:

- * C. A. Perry, chief, Baltimore.

Bureau of sanitary engineering:

- * Abel Wolman, B. S. E., chief, Baltimore.

Bureau of chemistry:

- * William F. Reindollar, chief, Baltimore.

Bureau of child hygiene:

- * J. H. Mason Knox, Jr., Ph. D., M. D., chief, Baltimore.

Appropriations for fiscal year ending September 30, 1938, \$455,691.

Publications issued by health department:

- Annual report.
- Weekly News Letter.
- Monthly bulletin.

**MASSACHUSETTS DEPARTMENT OF
PUBLIC HEALTH**

Public health council:

Henry D. Chadwick, M. D., chairman, Boston.
Richard M. Smith, M. D., Boston.
Francis H. Lally, M. D., Milford.
Richard F. Strong, M. D., Boston.
Charles F. Lynch, M. D., Springfield.
James L. Tighe, Holyoke.
George D. Dalton, M. D., Quincy.

Executive health officer:

*Henry D. Chadwick, M. D., State commissioner of public health, Boston.

Secretary:

*Florence L. Wall.

Division of administration:

(Under direction of commissioner.)

Division of communicable diseases:

*Gaylord W. Anderson, M. D., director, Boston.

Division of sanitary engineering:

*Arthur D. Weston, C. E., director and chief engineer, Boston.

Division of biologic laboratories:

*Elliott S. Robinson, M. D., director and pathologist, Boston.

Division of food and drugs:

*Hermann C. Lythgoe, director and analyst, Boston.

Division of child hygiene:

*M. Luise Diez, M. D., director, Boston.

Division of tuberculosis sanatoria:

*Alton S. Pope, M. D., director, Boston.

Division of adult hygiene:

*Herbert L. Lombard, M. D., director, Boston.

Division of genitoinfectious diseases:

*Nels A. Nelson, M. D., director, Boston.

Appropriations for department of public health, 1937:

Division of administration:	
Salary of commissioner.....	\$7,500
Personal services.....	20,955
Services other than personal.....	9,500
Division of child and maternal hygiene:	
Personal services of director and assistants.....	65,300
Services other than personal.....	25,000
Division of communicable diseases:	
Personal services of director, district health officers, etc.....	77,300
Services other than personal.....	15,200
Hospitalization chronic rheumatism.....	9,000
Division of genitoinfectious diseases:	
Personal services.....	13,305
Expenses in connection with control of genitoinfectious diseases.....	79,000
Wassermann Laboratory:	
For personal services.....	18,700
For expenses of laboratory.....	6,000
Antitoxin and vaccine laboratory:	
For personal services.....	80,000
Other services.....	36,500
Inspection of food and drugs:	
For personal services.....	62,900
Other services.....	12,300
For administering the shellfish law:	
Personal services.....	2,220
Other services.....	870
Water supply and disposal of sewage:	
For personal services.....	130,570
For other services.....	27,300
Division of tuberculosis:	
For personal services.....	40,155
Services other than personal.....	4,000
For personal services of tuberculosis clinic units.....	85,300
Services other than personal (clinic units).....	12,000
Payment of subsidies.....	456,000
For maintenance of and for certain improvements at the Lakeville, North Reading, Rutland, and Westfield State sanatoria.....	1,514,490
Division of adult hygiene:	
For personal services.....	47,900
For other expenses.....	49,500
Cancer hospital at Norfolk:	
For maintenance of and for certain improvements.....	570,050
Total.....	8,228,815

MICHIGAN DEPARTMENT OF HEALTH

Advisory council of health:

U. G. Rickert, D. D. S., Ann Arbor.
Louis J. Hirschman, M. D., Detroit.

George J. Curry, M. D., Flint.

Executive health officer:

*C. C. Slemmons, M. D., Dr. P. H., State health commissioner, Lansing.

Bureau of engineering:

*Edward D. Rich, C. E., director.
*Willard F. Shepard, assistant engineer.
*Raymond J. Faust, C. E., assistant engineer.
*Ora E. McGuire, assistant engineer.
*LaKue L. Miller, assistant engineer.
*Robert J. Smith, assistant engineer.
*John E. Miller, assistant engineer.

Bureau of laboratories:

*C. C. Young, Ph. D., D. P. H., director.
*Wm. E. Bunney, Ph. D., associate director, biologic products division.
*Minna Crooks, bacteriologist, associate director.
*G. D. Cummings, Ph. D., assistance director.
*Pearl L. Kendrick, associate director, Western Michigan division.

*Ora M. Mills, associate director, Upper Peninsula division.

*A. Exworthy, analytical chemist.
*Russell Y. Gottschall, Ph. D., bacteriologist.
*A. B. Haw, physiological chemist.
*M. B. Kurtz, D. V. M., serologist.
*C. B. Line, D. V. M., veterinary pathologist.
*D. B. Meyer, D. V. M., veterinarian.
*J. T. Tripp, Ph. D., physiological chemist.
*Beulah D. Westerman, Ph. D., bacteriologist.
*M. M. Woodward, toxicological chemist.

Bureau of child hygiene and public health nursing:

*Lillian R. Smith, M. D., director.
*G. B. Cornelinson, M. D., associate director.
*Emily L. Ripka, M. D., field physician.
*Berneta Block, M. D., field physician.
*Mabel G. Munro, R. N., consultant, maternal and child health nursing.
*Helen de Spelder Moore, R. N., chief nurse division of nursing.

Bureau of records and statistics:

*W. J. V. Deacon, M. D., director.
*Stuart T. Friant, statistician.

Bureau of education:

*Marjorie Delavan, director.
*Pearl Turner, assistant director.
*Wilbur J. Myers, charge of publications.
*Leah Baldwin, librarian.
*Melita Hutzler, lecturer.

Bureau of communicable diseases:

*C. D. Barrett, M. D., C. P. H., director.
*Philip Forsbeck, M. D., associate director, in charge of pneumonia control.
*A. W. Newitt, M. D., C. P. H., field epidemiologist, in charge of tuberculosis control.
*Russell E. Pleune, M. D., M. P. H., field epidemiologist, in charge of venereal disease control.
Richard Sears, M. D., field epidemiologist.

Bureau of mouth hygiene:

*William R. Davis, D. D. S., director.
*Ronald B. Fox, D. D. S., assistant.
*Ruth F. Rogers, D. H., assistant.

Bureau of county health administration:

*A. B. Mitchell, M. D., director.

Bureau of industrial hygiene:

*John Hepler, C. E., director.
*Paul F. Rezin, chemical engineer.
*Richard W. Collins, sanitary engineer.

Appropriations for fiscal year ending June 30, 1938:

Commissioner.....	\$6,000
Other personal services.....	124,000
Supplies, material, and contractual service.....	54,800
Outlay for equipment.....	4,000
County health units.....	109,500
Beaver Island physician.....	2,800
Venereal disease control.....	45,000
	845,000
Laboratory:	
Personal service.....	127,000
Supplies, material, and contractual service.....	82,000

Appropriations for fiscal year ending June 30, 1938—
Continued.

Laboratory—Continued.	
Outlay for equipment.....	\$2,000
Smallpox vaccine, toxoid manufacture.....	5,000
Antipneumococcus serum.....	30,000
Land and structures.....	6,500
	229,500

Publications issued by health department:
 Monthly bulletin.
 Annual report.
 Communicable-disease pamphlets.
 Sex-hygiene pamphlets.
 Child-hygiene pamphlets.
 Engineering bulletins.
 Mouth-hygiene pamphlets.
 Rules and regulations.

MINNESOTA DEPARTMENT OF HEALTH

Board of health:
 Frederic Bass, C. E., president, Minneapolis.
 Gustav Bachman, Ph. D., Minneapolis.
 N. G. Mortensen, M. D., St. Paul.
 S. Z. Kerian, M. D., Aitkin.
 E. T. Fitzgerald, M. D., Morris.
 Thomas G. Bell, Duluth.
 Erling S. Platou, M. D., Minneapolis.
 C. L. Melby, D. C., Owatonna.
 W. A. Brand, M. D., Redwood Falls.

Executive health officer, State Office Bldg., St. Paul:
 *A. J. Chesley, M. D., secretary and executive officer.

Division of administration, State Office Bldg., St. Paul:
 *O. C. Pierson, director.

Division of vital statistics, State Office Bldg., St. Paul:
 *Gerda C. Pierson, director.

Division of hotel inspection, State Office Bldg., St. Paul:
 *Laura E. Naplin, State hotel inspector
 Division of preventable diseases (including venereal diseases), University Campus, Minneapolis:
 *O. McDaniel, M. D., director.
 *Lucy Heathman, Ph. D., M. D., assistant director, and chief of laboratories.
 *Ralph R. Sullivan, M. D., senior epidemiologist.

Division of sanitation, University Campus, Minneapolis:
 *H. A. Whittaker, director.
 *O. E. Brownell, C. E., senior sanitary engineer.

Division of child hygiene, university campus, Minneapolis:
 Everett C. Hartley, M. D., director.
 *Olivia T. Peterson, R. N., superintendent of public-health nursing.
 *Vern D. Irwin, D. D. S., superintendent, dental health education.

Local health services, State office building, St. Paul:
 *Robert N. Barr, M. D., C. P. H., director.

Appropriations for fiscal years ending June 30, 1938 and 1939:

	1938	1939
Divisions of administration and vital statistics:		
Salaries.....	\$32,500	\$33,500
Expenses.....	5,000	7,000
Providing free antitoxin and other biologics.....	12,000	14,000
For aid to typhoid carriers.....		4,500
Division of preventable diseases: Preventable diseases and laboratory.....	74,000	76,000
Venereal disease control and venereal disease education.....	24,000	24,000
Division of sanitation: Sanitary engineering and laboratory.....	27,500	27,500
Stream pollution survey.....	11,000	11,000
Division of child hygiene: Protection for maternity and infant.....	20,000	20,000
Indian health work.....	8,000	10,000
Division of hotel inspection: Hotel inspection.....	45,000	45,000
Total.....	259,000	272,500

Publications issued by health department:
 Educational pamphlets.

MISSISSIPPI STATE BOARD OF HEALTH

Board of health:
 J. W. Lipscomb, M. D., president, Columbus.
 Felix J. Underwood, M. D., secretary, Jackson.
 S. E. Eason, M. D., New Albany.
 L. B. Austin, M. D., Rosedale.
 H. L. McKinnon, M. D., Hattiesburg.
 B. J. Shaw, M. D., State Springs.
 L. W. Brock, M. D., McComb.
 John B. Howell, M. D., Canton.
 W. H. Banks, M. D., Philadelphia.
 William R. Wright, D. D. S., Jackson.

Executive health officer:
 *Felix J. Underwood, M. D., secretary, State board of health, Jackson.

Vital statistics:
 *R. N. Whitfield, M. D., director, Jackson.

Child hygiene and public health nursing:
 *Felix J. Underwood, M. D., acting director, Jackson.

*Mary D. Osborne, R. N., associate director, public health nursing, Jackson.
 *Gladys Eyrich, supervisor, oral hygiene, Jackson.

Hygienic laboratory:
 *T. W. Kemmerer, M. D., director, Jackson.

Sanitary engineering:
 *H. A. Kroeze, C. E., director, Jackson.
 *N. M. Parker, D. V. S., State meat and milk supervisor, Jackson.
 *C. M. Ledbetter, assistant State sanitary engineer, Jackson.

*Floyd Ratliff, State sanitary inspector, Jackson.

County health work:
 *H. C. Ricks, M. D., C. P. H., director, Jackson.
 *John A. Milne, M. D., M. P. H., assistant director, Jackson.
 *Ora E. Phillips, R. N., supervising nurse.
 *Joseph E. Johnston, field supervisor of sanitation, Jackson.

Tuberculosis control:
 *Henry Boswell, M. D., director, Sanatorium.
 *W. D. Hickerson, M. D., clinician, field tuberculosis diagnostic unit, Sanatorium.

Industrial hygiene:
 *J. W. Dugger, M. D., director, Jackson.

Epidemiological unit:
 *A. L. Gray, M. D., M. P. H., director, Jackson.
 *Catherine Mayfield, bacteriologist.
 *Margaret Meade, nurse-investigator.

Health education:
 *Eva Moore Adams, supervisor.
 *Louise Williams, librarian.

State appropriations for period July 1, 1936, to June 30, 1937, \$175,000; July 1, 1937, to June 30, 1938, \$175,000.

Publications issued by health department:
 Biennial report.
 Health pamphlets.

MISSOURI STATE BOARD OF HEALTH

Board of health:
 E. Sanborn Smith, M. D., president, Kirksville.
 W. L. Brandon, M. D., vice president, Poplar Bluff.
 T. S. Bourke, M. D., Kansas City.
 Malberne, B. Clopton, M. D., St. Louis.
 L. Paul Forgrave, M. D., St. Joseph.
 Harry F. Parker, M. D., secretary, State health commissioner, Jefferson City.

Executive health officer:
 *Harry F. Parker, M. D., State health commissioner, Jefferson City.
 *W. H. Dorsey, business administrator and accountant.

Veneral disease control:
 *Robert D. Wright, M. D., director.

Local health work:
 *John W. Williams, Jr., M. D., C. P. H., director.

Child hygiene:
 *James W. Chapman, M. D., director.

Laboratories:
 *C. F. Adams, B. Agr., M. D., director.

Sanitary engineering:
 *W. Scott Johnson, director.

Vital statistics:
 *Thomas W. Chamberlain, director.

Medical licensure:

*Herman S. Gove, M. D., director.
Public health nursing:
 *Helena A. Dunham, R. N., director.
Cosmetology and hairdressing:
 *Nellia L. Killion, director.
Food and drug department:
 *Frank A. Barnes, bookkeeper.
Appropriations for the State board of health, biennial period 1937-38:
State board of health:
 Additions..... \$16, 000
 Operation..... 77, 500
 Personal service..... 213, 220
Total..... 306, 720

Medical licensure:
 Operation..... 10, 000
 Personal service..... 15, 000
Total..... 25, 000

Water and sewage:
 Operation..... 8, 000
 Personal service..... 7, 000
Total..... 15, 000

Cosmetology and hairdressing:
 Additions..... 300
 Operation..... 27, 900
 Repairs and replacements..... 200
 Personal service..... 50, 280
Total..... 78, 680

Food and drugs:
 Operation..... 38, 000
 Personal service..... 80, 920
Total..... 118, 920

MONTANA DEPARTMENT OF PUBLIC HEALTH

Board of health:
 B. L. Pampel, M. D., president, Livingston.
 L. H. Fligman, M. D., Helena.
 George F. Turman, M. D., Missoula.
 E. M. Porter, M. D., Great Falls.

W. F. Cogswell, M. D., secretary, Helena.
Executive health officer:
 *W. F. Cogswell, M. D., secretary, Helena.
Division of communicable diseases:
 *B. K. Kilbourne, M. D., epidemiologist and director of county health work, Helena.

Division of child welfare:
 *Jessie M. Bierman, M. D., director, Helena.

Division of food and drugs:
 *J. W. Forbes, director, Helena.
Division of vital statistics:
 *W. F. Cogswell, M. D., State registrar, Helena.
 *L. L. Benepe, deputy State registrar, Helena.

Division of water and sewage:
 *H. B. Foote, director, Helena.
 W. M. Cobleigh, consulting sanitary engineer, Bozeman.
 *Ludwig Champa, analyst, Helena.
 *C. W. Brinck, assistant sanitary engineer, Helena.

Hygienic laboratory:
 *Edith Kuhns, acting director, Helena.
 E. D. Hitchcock, M. D., consulting bacteriologist, Great Falls.

Appropriations for the years ending June 30:

	1936	1937
Salaries.....	\$23, 300	\$35, 000
Operating expenses.....	15, 750	14, 500
Capital repairs and replacements.....	500	300
Division of child welfare.....	10, 500	9, 000
Board of entomology (Rocky Mountain spotted-fever work).....	3, 000	500
Total.....	53, 050	59, 300

NEBRASKA DEPARTMENT OF HEALTH

Executive health officer:
 *P. H. Bartholomew, M. D., acting director of health, Lincoln.

Collaborating epidemiologist:
 *P. H. Bartholomew, M. D., Lincoln.

Public health laboratory:
 *L. L. Vose, bacteriologist, Lincoln.

Division of sanitary engineering:
 *T. A. Filipi, public health engineer, Lincoln.

Division of venereal diseases:
 *P. H. Bartholomew, M. D., director, Lincoln.
 *Edmund G. Zimmerer, M. D., assistant epidemiologist, Lincoln.

Division of vital statistics:
 *Jean Barrett, Lincoln.

Division of maternal and child health:
 *J. Warren Bell, M. D., director, Lincoln.

Medical examining board:
 W. R. Boyer, M. D., Pawnee City.
 H. J. Lehnhoff, M. D., Lincoln.
 P. A. DeOgny, M. D., Milford.

Appropriations for biennial period ending June 30, 1939:

Salary of director.....	\$6, 400
Salaries.....	29, 000
Maintenance.....	12, 000
Special:	
Public health work.....	20, 000
Maternal and child health.....	32, 000
Public health education in tuberculosis and venereal disease.....	6, 000
Total.....	105, 400

NEVADA STATE BOARD OF HEALTH

State board of health:
 Richard Kirman, Sr., Governor, president, Carson City.

John E. Worden, M. D., secretary and State health officer, Carson City.

Malcolm McEachin, secretary of State.

John Fuller, M. D., Reno.
 C. W. West, M. D., Reno.

Executive health officer:
 John E. Worden, M. D., State health officer, Carson City.

Division of communicable disease control:
 *A. Floyd Gardner, M. D., C. P. H., director, Carson City.

Division of sanitary engineering:
 *Wm. Wallace White, E. M., O. P. H. E., director, Carson City.

Division of maternal and child health:
 *H. Earl Belpap, M. D., director, Carson City.

State hygienic laboratory at State university:
 *Vera E. Young, acting director, Reno.

Appropriations for period from July 1, 1937, to June 30, 1939:

Salary of secretary.....	\$5, 000
Salary of clerk.....	3, 600
Traveling expenses.....	1, 000
Office supplies, heat, rent, and light.....	1, 550
Record books for county registrars.....	300
Equipment.....	200
Registration of births and deaths.....	350
Purchase of diphtheria and other dangerous disease antitoxin.....	500
Total.....	12, 500

Publications issued by health department:
 Biennial report.
 Special bulletins.

NEW HAMPSHIRE STATE BOARD OF HEALTH

Board of health:
 George C. Wilkins, M. D., Manchester.

Barbara Beattie, M. D., Littleton.

Francis P. Murphy, governor, Nashua (ex officio).

Thomas P. Cheney, attorney general, Laconia. (ex officio).

James W. Jameson, M. D., Concord.
 Percy A. Shaw, Manchester.

Executive health officer:
 *T. P. Burroughs, M. D., secretary, Concord.

Division of maternal and child health:
 *Byron H. Farrall, M. D., director, Boscaewen.
Crippled children's services:
 *Byron H. Farrall, M. D., director, Boscaewen.
Department of vital statistics:

Division of chemistry and sanitation:
 *Charles D. Howard, chief, Concord.
 *Frederick Vintinner, assistant chemist, Concord.
 *Harriet I. Albee, assistant chemist and bacteriologist, Concord.
 *Leonard W. Trager, sanitary engineer, Concord.
 *Joseph X. Duval, chief inspector, Concord.
 *Russell A. Eckloff, sanitary inspector, Concord.
Diagnostic and pathological department:
 *William R. Macleod, serologist and diagnostic bacteriologist, Concord.
 H. N. Kingsford, M. D., pathologist, Hanover.
 *Benjamin Jewell, assistant in pathological laboratory, Concord.

Veneral disease division:
 *Charles A. Weaver, M. D., Manchester.
Appropriations for fiscal year ending June 30, 1938:

State board of health.....	\$60,540
Laboratory of hygiene.....	20,020
Vital statistics.....	4,730

Total.....\$85,290

Publications issued by health department:
 Bulletin "Health News."
 Biennial report.

NEW JERSEY DEPARTMENT OF HEALTH

Board of health:
 Irvin E. Deibert, M. D., president, Camden.
 Mrs. Helen M. Barry, vice president, Newark.
 Margaret L. MacNaughton, Jersey City.
 Joseph N. Fowler, Bivalve.
 E. W. Smillie, V. M. D., Plainsboro.
 J. E. H. Guthrie, D. D. S., Newark.
 Clyde Potts, C. E., Morristown.
 John V. Bishop, Columbus.
 James E. Russell, Trenton.
 Stanley H. Nichols, M. D., Asbury Park.
 Augustus L. L. Baker, M. D., Dover.

Executive health officer:
 *J. Lynn Mahaffey, M. D., director of health, Trenton.

Bureau of bacteriology:
 *John V. Mulcahy, chief, Trenton.
Bureau of chemistry:
 *John E. Bacon, chief, Trenton.
Bureau of administration:
 *Edmund R. Outcalt, acting chief, Trenton.
Bureau of food and drugs:
 *Walter W. Scofield, chief, Trenton.
Bureau of child hygiene:
 Julius Levy, M. D., consultant, Trenton.
Bureau of local health administration:
 *Wm. H. MacDonald, chief, Trenton.
Bureau of engineering:
 *H. P. Croft, chief, Trenton.
Bureau of vital statistics:
 *David S. South, chief, Trenton.
Bureau of veneral disease control:
 A. J. Casselman, M. D., consultant, Trenton.

Appropriations for fiscal year ending June 30, 1938:

Salaries.....	\$229,370
Miscellaneous.....	64,315
Child hygiene.....	100,415
Veneral disease control.....	25,540
Other special appropriations.....	65,605
Total.....	485,245

Publications issued by health department:
 Bi-monthly bulletin.
 Annual report.

NEW MEXICO DEPARTMENT OF PUBLIC HEALTH

Board of public health:
 E. W. Fiske, M. D., chairman, Santa Fe.
 Eugene P. Sims, M. D., vice chairman, Alamogordo.
 E. P. Moore, secretary, Santa Fe.
 M. K. Wylder, M. D., Albuquerque.
 Mrs. Tobias Espinosa, Espanola.

Executive health officer:
 *E. B. Godfrey, M. D., director of public health, Santa Fe.
Division of sanitary engineering and sanitation:
 *Paul S. Fox, M. S. in C. E., chief, Santa Fe.
Division of county health work:
 *C. H. Douthirt, M. D., director, Santa Fe.
Division of epidemiology:
 *E. F. McIntyre, M. D., C. P. H., epidemiologist, Santa Fe.
Division of maternal and child health:
 *Hester B. Curtis, M. D., M. P. H., director, Santa Fe.
State supervisor of public health nursing:
 *Mrs. Fannie T. Warncke, R. N., Santa Fe.
Division of health education:
 *Charles M. Cree, chief, Santa Fe.
Public health laboratory:
 *Miss Myrtle Greenfield, chief, Albuquerque.
State registrar:
 *Miss Billy Tober, Santa Fe.
Appropriation for years 1937-38 and 1938-39, per annum, \$59,500. Fiscal year ends June 30.

NEW YORK STATE DEPARTMENT OF HEALTH

Public-health council:
 Simon Flexner, M. D., LL. D., chairman, New York.
 Homer Folks, LL. D., vice chairman, Yonkers.
 Livingston Farrand, M. D., LL. D., Ithaca.
 Walter A. Leonard, M. D., Cambridge.
 Henry N. Ogden, C. E., Ithaca.
 Herman G. Weiskotten, M. D., Syracuse.
 George Baehr, M. D., New York.
 Clayton W. Greene, M. D., Buffalo.
 Edward S. Godfrey, Jr., M. D. (ex officio), commissioner of health, Albany.
Executive health officer:
 *Edward S. Godfrey, Jr., M. D., State commissioner of health, Albany.
Deputy commissioner of health:
 *Paul B. Brooks, M. D., Albany.
Assistant commissioner for local health administration:

Assistant commissioner for preventable diseases:
 *George H. Ramsey, M. D., Albany.
General superintendent of tuberculosis hospitals:
 *Robert E. Plunkett, M. D.
Administrative officer:
 *Edmund Schreiner, LL. R., Albany.
Administrative finance officer:
 *Clifford C. Shoro, Albany.
Division of public health education:
 *B. R. Rickards, director, Albany.
Division of sanitation:
 *Charles A. Holmquist, C. E., director, Albany.
Division of vital statistics:
 *Joseph V. de Porte, Ph. D., director, Albany.
Division of maternity, infancy, and child hygiene:
 *Elizabeth M. Gardiner, M. D., director, Albany.
Division of communicable diseases:

Division of tuberculosis:
 *William Siegal, M. D., director, Albany.
Division of syphilis control:
 *William A. Brumfield, M. D., director, Albany.
Division of laboratories and research:
 *August B. Wadsworth, M. D., director, Albany.
Division of public health nursing:
 *Marion W. Sheahan, R. N., director, Albany.
Division of orthopedics:
 *Walter J. Craig, M. D., director, Albany.
Division of cancer control:
 *Burton T. Simpson, M. D., director.

State institute for the study of malignant diseases, Buffalo:
 *Burton T. Simpson, director.
New York State Hospital for Incipient Pulmonary Tuberculosis, Ray Brook:
 *H. A. Bray, M. D., superintendent.
New York State Reconstruction Home, West Haverstraw:
 *John B. Kelly, superintendent.
Homer Folks Tuberculosis Hospital, Oneonta:
 *Ralph Horton, M. D., superintendent.

New York State Tuberculosis Hospital, Mount

Morris:

*N. Stanley Lincoln, M. D., superintendent.

Herman M. Biggs Memorial Hospital, Ithaca:

*John K. Deegan, M. D., superintendent.

Appropriations for fiscal year ending June

30, 1938:

Personal service.....	\$2,348,600
Maintenance and operation.....	1,596,168
State aid to county laboratories.....	110,000
State aid to county health activities.....	611,268
Construction and permanent betterments.....	1,186,800
Pneumonia control.....	400,000

Total.....

6,252,836

Other sources of revenue:

Fees from certified transcripts of birth, death, and marriage certificates, per annum.....	5,892
Marriage license applications.....	36,965
Licensing laboratories.....	392
Sale of serums.....	2,893
Licensing of embalmers and undertakers.....	4,772
Registration of embalmers and undertakers.....	25,800
Rental of radium.....	71
Miscellaneous receipts.....	284
Care of county cases at reconstruction home.....	389,252
Refund of transportation of discharged patients from tuberculosis hospitals, Ray Brook.....	3,543
Care of county patients at Homer Folks Tuberculosis Hospital, Oneonta.....	76,516
Care of county patients at Mt. Morris Tuberculosis Hospital, Mt. Morris, N. Y.....	55,734
Care of county patients at Herman M. Biggs Memorial Hospital, Ithaca, N. Y.....	21,427

Publications issued by health department:

Weekly Health News.
Monthly Vital Statistics Review.
Annual Report.

NORTH CAROLINA STATE BOARD OF HEALTH

Board of health:

S. D. Craig, M. D., president, Winston-Salem.
J. N. Johnson, D. D. S., vice president, Goldsboro.

G. G. Dixon, M. D., Ayden.

H. Lee Large, M. D., Rocky Mount.

H. G. Baity, Chapel Hill.

W. T. Rainey, M. D., Fayetteville.

Hubert B. Haywood, M. D., Raleigh.

James P. Stowe, Ph. G., Charlotte.

John LaBruce Ward, M. D., Asheville.

Executive health officer:

*Carl V. Reynolds, M. D., secretary-treasurer and State health officer, Raleigh.

Division of preventive medicine:

*G. M. Cooper, M. D., director, and assistant State health officer, Raleigh.

*Roy Norton, M. D., assistant director, Raleigh.

*James T. Barnes, State supervisor of crippled children, Raleigh.

(a) Maternity and infancy.

(b) Health education.

(c) School health supervision.

(d) Crippled children.

Division of oral hygiene:

*Ernest A. Branch D. D. S., director, Raleigh.

Division of sanitary engineering:

*Warren H. Booker, C. E., director, Raleigh.

Division of laboratories:

John H. Hamilton, M. D., director, Raleigh.

Division of epidemiology:

*J. C. Knox, M. D., M. P. H., director, Raleigh.

*G. M. Leiby, M. D., venereal disease control officer.

Division of county health work:

*R. E. Fox, M. D., M. P. H., director, Raleigh.

*Walter J. Hughes, M. D., field agent.

Division of vital statistics:

*R. T. Stimpson, M. D., director, Raleigh.

Division of industrial hygiene:

*H. F. Eason, M. D., director, Raleigh.

*R. L. Robinson, M. D., assistant director, Raleigh.

Appropriation for fiscal year ending June 30, 1938, \$323,200.

Other sources of revenue: Special fees, \$61,366.

NORTH DAKOTA STATE DEPARTMENT OF HEALTH

Advisory health council:

John Crawford, M. D., New Rockford.

Agnes Stucke, M. D., Garrison.

C. D. Dursema, D. D. S., Bismarck.

P. O. Sathre, attorney general, ex officio, Bismarck.

Arthur E. Thompson, superintendent of public instruction, ex officio, Bismarck.

Maysil M. Williams, M. D., C. P. H., State health officer.

Executive health officer:

*Maysil M. Williams, M. D., C. P. H., State health officer, Bismarck.

Division of child hygiene and public health nursing:

*August C. Orr, M. D., director.

*Margrete Skaarup, R. N., supervisor, public health nursing.

Division of preventable diseases:

*John A. Cowan, M. D., director.

Division of vital statistics:

*Margaret D. Lang, director.

Division of sanitary engineering:

*Mark D. Hollis, C. E., director.

Division of laboratories:

*Melvin E. Koons, director, Grand Forks.

Appropriations for biennial period ending June 30, 1939:

State department of health:	
Salary of State health officer.....	\$6,000
Epidemiologist.....	4,800
Vital statistician.....	2,640
Sanitary engineer.....	5,000
Chief clerk.....	3,000
Stenographers.....	8,640
Clerks.....	3,840
Postage.....	2,000
Office supplies.....	1,500
Furniture and fixtures.....	1,000
Printing.....	2,500
Miscellaneous.....	1,000
Travel expense.....	7,600
Card indexing.....	3,000
Arsenicals.....	6,000
Automobile.....	500
	<hr/>
	59,020

Public health laboratories:

Postage.....	1,000
Office supplies.....	400
Furniture and fixtures.....	2,000
Printing.....	500
Miscellaneous.....	1,500
Travel.....	300
Laboratory supplies.....	4,000
Emergency.....	1,000

Bismarck laboratory:

Director and first technician.....	5,000
Second technician.....	2,800
Stenographer.....	1,920
Dishwasher.....	300

Grand Forks laboratory:

First technician.....	5,000
Second technician.....	2,800
Stenographer.....	1,920
Dishwasher.....	300

30,740

Division of child hygiene:

Salary, director of division.....	7,200
Supervisor—public health nurses.....	4,800
Assistant supervisor—public health nurses.....	4,200
Physician for pre-school conferences.....	3,000
Stenographers.....	4,320
Postage.....	1,000

Appropriations for biennial period ending June 30, 1939—Continued.

Division of child hygiene—Continued.	
Office supplies.....	\$600
Furniture and fixtures.....	200
Printing.....	3,000
Miscellaneous.....	400
Travel expense.....	7,880
Biologicals.....	2,500
	39,020
Total.....	128,780

OHIO DEPARTMENT OF HEALTH

Public health council:
 Walter H. Hartung, M. D., chairman, Columbus.
 F. E. Mahla, M. D., secretary, Columbus.
 Warren C. Breidenbach, M. D., Dayton.
 H. G. Southard, M. D., Marysville.
 W. I. Jones, D. D. S., Columbus.
 A. Julius Freiberg, LL. B., Cincinnati.

Executive health officer:
 *Walter H. Hartung, M. D., director of health, Columbus.
 Assistant director of health:
 *F. E. Mahla, M. D.

Division of administration:
 *F. E. Mahla, M. D., chief.
 *C. A. Orrison, chief clerk.

Bureau of local health organization:
 *R. W. DeCrow, M. D., chief.

Division of communicable diseases:
 *Finley Van Orsdall, M. D., chief.

Bureau of tuberculosis:
 *W. J. Smith, M. D., chief.

Bureau of prevention of blindness and venereal disease control:
 *W. P. Johnson, M. D., chief.

Division of sanitary engineering:
 *F. H. Waring, B. S. in C. E. and S. E., chief.

Bureau of plumbing inspection:
 *R. T. Barrett, chief.

Division of vital statistics:
 *Irva C. Plummer, chief.

Division of laboratories:
 *Leo F. Ey, chief.

Division of hygiene:

Bureau of hospital:
 *Clara E. Reeder, R. N., chief.

Bureau of occupational diseases and industrial hygiene:

Bureau of child hygiene:

Bureau of dental hygiene:
 *D. L. Houser, D. D. S., chief.

Division of public health nursing:
 *S. Gertrude Bush, R. N., chief.

Appropriations for 12 months ending Dec. 31, 1937:

Personal services.....	\$189,500
Maintenance.....	42,177
State aid for health districts.....	150,000
Total.....	381,677

Publications issued by health department:
 Ohio Health News (monthly).

OKLAHOMA DEPARTMENT OF PUBLIC HEALTH

Executive health officer:
 *Charles M. Pearce, M. D., State health commissioner, Oklahoma City.

Assistant State health commissioner:
 *J. P. Folan, Oklahoma City.

Bureau of vital statistics:
 *Alice L. Talbot, State registrar, Oklahoma City.
 *Jo. C. Rose, statistician, Oklahoma City.

Bureau of maternal and child health:
 *Paul J. Collopy, M. D., Medical director, Oklahoma City.
 *J. T. Bell, M. D., assistant director, Oklahoma City.
 *Laura Van De Mark, R. N., director of nurses, Oklahoma City.

Bureau of epidemiology:
 *Martin R. Beyer, M. D., director, Oklahoma City.

Bureau of sanitary engineering:
 *Henry J. Darcey, director, Oklahoma City.
 *Paul Henderson, assistant, Oklahoma City.
 *Carl Warkentin, assistant, Oklahoma City.

Bureau of diagnostic laboratories:
 *Taylor Rogers, State chemist, director, Oklahoma City.
 *Floyd Whipple, bacteriologist, Oklahoma City.

Branch laboratory:
 *Frances Kelleam, Tahlequah.
 *J. P. Hutchinson, Elk City.

Bureau of venereal disease control:
 *B. M. Adams, M. D., director, Oklahoma City.

Bureau of full-time health units and districts:
 *Chas. E. Leonard, M. D., director, Oklahoma City.

Bureau of dental education:
 *F. P. Bertram, D. D. S., director.
 *C. C. Kersey, D. D. S., assistant.

Bureau of tuberculosis control:
 *W. P. Murphy, M. D., director.

Bureau of community sanitation and malaria control:
 *Hugh Payne, director.

Bureau of milk control:
 *Wm. J. Wyatt, director.

Appropriation for fiscal year ending June 30, 1938..... \$290,250
 Appropriation for fiscal year ending June 30, 1939..... 281,650

OREGON STATE BOARD OF HEALTH

Board of health:
 N. E. Irvine, M. D., president, Lebanon.
 Arthur W. Chance, D. D. S., M. D., vice president, Portland.
 Robert L. Benson, M. D., Portland.
 Frank R. Mount, M. D., Portland.
 F. Floyd South, M. D., Portland.
 Archie C. Van Cleve, M. D., Portland.
 W. J. Weese, M. D., Ontario.

Executive health officer:
 *Frederick D. Stricker, M. D., secretary and State health officer, Portland.

Registrar of vital statistics:
 *Frederick D. Stricker, M. D., Portland.

Division of public health nursing and child hygiene:
 Olive M. Whitlock, R. N., Portland.

Director of laboratory:
 *William Levin, D. P. H., Portland.

Division of sanitary engineering:
 Carl E. Green, sanitary engineer.

Appropriations for fiscal year ending December 31, 1937 \$40,972.18.

Publications issued by health department:
 Annual report.
 Biennial report.
 Pamphlets and posters.
 Weekly letter.

PANAMA CANAL ZONE HEALTH DEPARTMENT

Executive health officer:
 *Col. H. C. Pillsbury, Medical Corps, United States Army, chief health officer, Balboa Heights.
 *D. P. Curry, M. D., assistant chief health officer, Balboa Heights.
 *L. B. Bates, M. D., chief, board of health laboratory, Ancon.
 *O. E. Denney, Surgeon, U. S. P. H. S., chief quarantine officer, Balboa Heights.

Appropriation for 1937-1938, \$1,665,000.

PENNSYLVANIA DEPARTMENT OF HEALTH

Advisory health board:
 Edith MacBride-Dexter, M. D., chairman.
 Moses Behrend, M. D., Philadelphia.
 R. J. Behan, M. D., Pittsburgh.
 E. S. Briggs, M. D., Warren.
 Walter B. Brenholtz, M. D., Williamsport.
 John A. Meehan, D. D. S., New Castle.

Sanitary water board:

Edith MacBride-Dexter, M. D., chairman.
James F. Bogardus, secretary of forests and waters
Charles A. French, commissioner of fisheries.
Phillip G. Platt, Wallingford.
Marion McKay, Pittsburgh.
Frank D. McCue, Oil City.
W. L. Stevenson, chief engineer and secretary.
J. R. Hoffer, civil engineer and acting secretary.

Executive Bureau:

*Edith MacBride-Dexter, M. D., secretary of health, Harrisburg.
*Paul A. Rothfuss, M. D., deputy secretary of health, Harrisburg.
*Clinton T. Williams, comptroller, Harrisburg.
Division of accounts:
*E. J. MacNamara, Harrisburg.
Division of Supplies:
*B. J. Purvis, Harrisburg.
Division of Laboratories:
*Louis Tuft, M. D., Philadelphia.
Division of public health education:
*Howard L. Katzander, Harrisburg.
Division of dental hygiene:
*Milton Waas, D. D. S., Harrisburg.

Institutions:

Mont Alto Sanatorium:
*C. C. Custer, M. D., medical director, South Mountain.

Cresson Sanatorium:

*Louis A. Wesner, M. D., medical director, Cresson.

Hamburg Sanatorium:

*H. A. Gorman, M. D., medical director, Hamburg.

State Hospital for Crippled Children:

*John S. Donaldson, M. D., chief surgeon, Elizabethtown.
*Mrs. Hazel Smith, superintendent, Elizabethtown.

Bureau of health law enforcement:

*Paul A. Rothfuss, M. D.

Division of school medical inspection:

*Ted Rosenburg, Harrisburg.

Division of drug control:

*Michael V. McFadden, Harrisburg.

Division of restaurant hygiene:

*Robert W. Shelton, Harrisburg.

Division of inspection:

*Horace Krone, Harrisburg.

Bureau of maternal and child health:

*Wayne S. Ramsey, M. D., Harrisburg.

Bureau of health conservation:

*J. Moore Campbell, M. D., Harrisburg.

Division of syphilis and genitoinfectious diseases:

*Edgar S. Everhart, M. D., Harrisburg.

Division of epidemiology:

*Paul A. Keeney, M. D., Harrisburg.

*C. B. Mather, M. D., Harrisburg.

Division of tuberculosis:

*Murray L. McElwee, M. D., Harrisburg.

*Sydney L. Feldstein, M. D., Harrisburg.

Division of environmental hygiene:

*Edward Garner, Harrisburg.

*Robert Glenn, Harrisburg.

Bureau of nursing:

*Alice M. O'Halloran, R. N., Harrisburg.

Bureau of milk sanitation:

*Wilbur K. Moffett, Harrisburg.

Bureau of sanitary engineering:

*W. L. Stevenson, Harrisburg.

Bureau of vital statistics:

*Frank P. Strome, M. D., Harrisburg.

Appropriation for biennial period ending May 31, 1939:

Salary of secretary.....	\$20,000
General health purposes and maintenance of sanatoria and hospital for crippled children.....	6,178,500
Total.....	6,198,500

**PUBLIC HEALTH AND WELFARE SERVICE
OF THE PHILIPPINES**

(Under the Department of Public Instruction)

Commissioner of health and welfare:

*José Fabella, M. D., Manila.

PUERTO RICO DEPARTMENT OF HEALTH**Insular board of health:**

R. López Sicardó, M. D., chairman, San Juan.
W. A. Glines, M. D., San Juan.
E. Koppisch, M. D., San Juan.
Blas C. Herrero, M. D.
D. C. Cook, expert chemist.
Etienne Totti, civil and sanitary engineer, San Juan.

A. Rivera, veterinarian

Manuel del Valle, D. D. S.

A. Ortiz Toro, attorney, San Juan.

H. A. Bladuell, M. D., secretary.

Executive health officer:

*E. Garrido Morales, M. D., Dr. P. H., commissioner of health, San Juan.

*Antonio Arbons, M. D., assistant commissioner of health, section of public health, San Juan.

*Pedro S. Malaret, M. D., assistant commissioner of health, section of charities, San Juan.

*George C. Payne, M. D., advisor, public health administration.

Division of property and accounts:

*Rafael Méndez, chief, San Juan.

Bureau of general sanitation:

*W. F. Lippitt, M. D., chief, San Juan.

Bureau of sanitary engineering:

*Octavio Marcano, C. E., S. E., San Juan.

Bureau of general inspection of construction and plumbing:

*José Cantelops, chief, San Juan.

Biological laboratory:

*Oscar Costa Mandry, M. D., director, San Juan.

Chemical laboratory:

*R. del Valle Sárraga, Ph. C., director, San Juan.

Bureau of epidemiology and vital statistics:

*Abel de Juan, M. D., chief, San Juan.

*S. Riera López, M. D., C. P. H., epidemiologist, San Juan.

*J. Basora Defilló, M. D., C. P. H., epidemiologist, San Juan.

*J. Rodríguez Pastor, M. D., tuberculosis specialist, San Juan.

Bureau of infant hygiene:

*Marta Robert de Romeu, M. D., chief, San Juan.

Bureau of public health units:

José Chaves, M. D., chief, San Juan.

Bureau of social welfare:

*Beatriz Lassalle, superintendent, San Juan.

Appropriations for the fiscal year 1937-38:

Office of the commissioner.....	\$139,188.17
Bureau of general sanitary inspection.....	53,050.00
Bureau of sanitary engineering.....	42,625.00
Biological laboratories.....	53,846.75
Chemical laboratory.....	21,340.00
Bureau of epidemiology and vital statistics.....	183,136.25
Bureau of infant hygiene.....	13,476.75
Bureau of public health units.....	454,106.75
Section of charities.....	778,443.70
Total.....	1,744,273.37

**RHODE ISLAND DEPARTMENT OF PUBLIC
HEALTH**

Executive health officer:

*Edward A. McLaughlin, M. D., director of public health and State registrar ex-officio, State Office Building, Providence.

Bureau of preventable diseases:

*Morris L. Grover, M. D., M. P. H., epidemiologist.

*Thomas B. Casey, administrative assistant.

*Daniel L. Morrissey, M. D., assistant epidemiologist.

Bureau of maternal and child welfare:

*Francis V. Corrigan, M. D., chief.

*Edward Conaty, fiscal officer.

Bureau of crippled children:

*William A. Horan, M. D., chief.

Division of industrial hygiene:

*James P. Deery, M. D., chief.

*Charles L. Pool, engineer.

- Division of laboratories:
 - *Edgar J. Staff, chief.
 - *James Dillon, sanitary engineer.
- Division of vital statistics:
 - *Genevieve E. Dolan, assistant registrar.
- Division of purification of waters:
 - *Walter J. Shea, chief.
- Division of food and drugs and sanitary inspection:
 - *Henry J. McLaughlin, Ph. G., special agent.
- Division of narcotic drugs and pharmacies:
 - *A. Norman LaSalle, Ph. G., LL. B., chief.
- Division of examiners:
 - *Robert D. Wholey, chief.
- Division of athletics:
 - *Charles F. Reynolds, chief.
- Northern district health unit:
 - *James P. O'Brien, M. D., district health officer.
- Southern district health unit:
 - *Raymond F. McAteer, M. D., district health officer.
- Southeastern district health unit:
 - *Joseph Castrol, M. D., district health officer.

State appropriations for the fiscal year ending June 30, 1938:

Administrative.....	\$20, 100
Bureau of preventable diseases.....	15, 255
Bureau of maternal and child welfare.....	27, 175
Bureau of crippled children.....	11, 500
Bureau of industrial hygiene.....	11, 500
Laboratory division:	
Pathological laboratory.....	29, 985
Chemical laboratory.....	16, 215
Vital statistics.....	11, 200
Sanitary inspection.....	27, 325
Narcotic drugs and pharmacies.....	10, 050
Purification of waters.....	9, 830
Food and drugs.....	5, 720
Athletics.....	7, 900
Examiners.....	12, 050
Total State appropriation for department of health.....	215, 805

Other sources of revenue:
Funds made available under provisions of the Social Security Act:

U. S. Public Health Service.....	\$60, 227
U. S. Children's Bureau.....	84, 505

Registration fees: Chiroprody, \$3; chiropractic, \$3; optometry, \$3; dentistry, \$1; funeral directors, \$10; embalmers, \$5; hairdressers, \$2; dental hygienist, \$1; barbers, \$2; nurses, \$0.50; midwives, \$0.50.

Licenses for swimming pools:
For the entire year, \$20; for any quarter thereof, \$5.

Licenses for camps and bathing beaches, \$10 per annum.

Fees for certified copies of birth, marriage, and death certificates, each \$0.50.

Publications:
Annual health report.
Annual registration report.
Weekly and monthly morbidity reports.
Monthly health revue.
Monthly vital statistics report.

SOUTH CAROLINA STATE BOARD OF HEALTH

- Executive committee:
 - F. M. Routh, M. D., chairman, Columbia.
 - K. M. Lynch, M. D., Charleston.
 - W. R. Mead, M. D., Florence.
 - E. A. Hines, M. D., Seneca.
 - W. R. Wallace, M. D., Chester.
 - L. D. Boone, M. D., Aiken.
 - George W. Dick, D. D. S., Sumter.
 - D. Lesesne Smith, M. D., Spartanburg.
 - J. Lee Carpenter, Ph. G., Greenville.
 - John M. Daniel, attorney general, Columbia.
 - A. J. Beattie, comptroller general, Columbia.
- Executive health officer:
 - *James A. Hayne, M. D., State health officer, Columbia.
 - G. E. McDaniel, epidemiologist, Columbia.
- Bureau of rural sanitation and county health work:
 - *Ben. F. Wyman, M. D., director, Columbia.

Hygienic laboratory:
*H. M. Smith, M. D., director, Columbia.

Bureau of vital statistics:
*Martin Woodward, M. D., director, Columbia.
Appropriations, July 1, 1937, to June 30, 1938:

Superintendence and control of health.....	\$1, 270
Superintendence and accounts.....	21, 027
Bureau of rural sanitation and county health work.....	70, 150
Bureau of vital statistics.....	10, 580
Hygienic laboratory.....	12, 280
Distribution of biologics.....	34, 000
Total.....	158, 307

SOUTH DAKOTA STATE BOARD OF HEALTH

- Board of health:
 - N. T. Owen, M. D., president, Rapid City.
 - Park B. Jenkins, M. D., superintendent, Pierre.
 - J. B. Vaughn, M. D., Castlewood.
 - R. J. Quinn, M. D., Burke.
- Executive health officer:
 - *Park B. Jenkins, M. D., superintendent, Pierre.
 - *B. A. Dyar, M. D., assistant health officer, Pierre.
 - *G. J. Van Heuvelen, director of crippled children, Pierre.
 - *R. H. Wilcox, epidemiologist, Pierre.
 - *Park B. Jenkins, M. D., division of vital statistics, Pierre.
 - *Viola Russell, M. D., director of maternal and child health, Pierre.
 - *W. W. Towne, division of sanitary engineering, Pierre.
 - *John Wiley, assistant sanitary engineer, Pierre.
 - *Richard Poston, assistant sanitary engineer, Pierre.
- B. A. Dyar, M. D., director of medical license, Pierre.
- Katherine Niebuhr, division of accounts and records, Pierre.
- J. C. Ohlmacher, M. D., laboratories (at Vermillion), Vermillion.

	1937-38	1938-39
Appropriations:		
Salaries and wages.....	\$10, 000	\$10, 000
Administrative expense to be used in connection with Federal funds.....	10, 000	10, 000
Biological products.....	2, 000	2, 000
Postage, communication, and travel.....	3, 000	3, 000
Crippled children.....	25, 000	25, 000
Dues.....	25	25
Infancy and maternity work.....	5, 000	5, 000
Office supplies, printing, and binding.....	2, 000	2, 000
Total.....	57, 025	57, 025

TENNESSEE DEPARTMENT OF PUBLIC HEALTH

- Central administration:
 - *W. C. Williams, M. D., C. P. H., commissioner, Nashville.
- Local health service:
 - *R. H. Hutcheson, M. D., C. P. H., director, Nashville.
- Maternal and child hygiene:
 - *John M. Saunders, M. D., C. P. H., associate director, Nashville.
- Public health nursing:
 - *Miss Frances Hagar, R. N., associate director, Nashville.
- Division of vital statistics:
 - *W. W. Hubbard, M. D., acting director, Nashville.
- Division of preventable diseases:
 - *C. B. Tucker, M. D., C. P. H., acting director, Nashville.

Division of sanitary engineering:

*Howard D. Schmitt, C. E., acting director, Nashville.

Division of laboratories:

*W. H. Gaub, C. P. E., director, Nashville. State appropriation for year ending June 30, 1938, \$375,000.

Other sources of revenue:

Rockefeller Foundation International Health Division, for year ending June 30, 1938, \$27,100.
Commonwealth Fund, for year ending June 30, 1938, \$37,447.

(Figures are exclusive of Federal and local appropriations.)

TEXAS STATE DEPARTMENT OF HEALTH**State board of health:**

W. P. Harrison, M. D., chairman, Teague.
J. S. McCelvey, M. D., vice chairman, Temple.
S. J. Alexander, M. D., Hearne.
Henry F. Hein, Phar. D., San Antonio.
Hubert Jackson, D. D. S., San Antonio.
R. J. Rowe, M. D., Kaufman.
E. W. Wright, M. D., Bowles.

Executive officer:

*Geo. W. Cox, M. D., State health officer, Austin.

Vital statistics:

*W. A. Davis, M. D., registrar.

State laboratory:

*S. W. Bohls, M. D., director.

Epidemiology:

*A. M. Clarkson, M. D., director.

Maternal and child health:

*J. W. E. H. Beck, M. D., director.
*J. M. Coleman, M. D., field director.

County health units:

*G. W. Luckey, M. D., field director.

Industrial hygiene:

*Carl A. Nau, M. D., director.

Tuberculosis control:

*Arthur Burns, M. D., director.

Veneral disease control and mental hygiene:

*W. Arthur Smith, M. D., director.

Malaria investigation:

*C. F. Coogle, M. D., director.

Dental health:

*Edward Taylor, D. D. S., director.

Sanitary engineering:

*V. M. Ehlers, C. E., director.

Food and drugs:

*F. D. Brock, Ph. G., director.

Public health education:

*L. E. Bracy, director.

Public relations:

*Stanford Payne, director.

Administrative assistant:

*P. A. Kerby.

Chief clerk and accountant:

*G. N. Holton.

Appropriations (annual) for fiscal years ending August 31, 1938 and 1939:

Central administration.....\$219,381
District health units.....97,500

UTAH STATE BOARD OF HEALTH**Board of health:**

Joseph R. Morrell, M. D., president, Ogden.
J. L. Jones, M. D., secretary, Salt Lake City.
T. B. Beatty, M. D., Salt Lake City.
E. A. Tripp, D. D. S., Salt Lake City.
T. J. Howells, M. D., Salt Lake City.
R. A. Hart, C. E., Salt Lake City.
Barnet E. Bonar, M. D., Salt Lake City.

Executive health officer:

*J. L. Jones, M. D., Dr. P. H., State health commissioner, Salt Lake City.

Division of public health education:

*D. C. Houston, director, Salt Lake City.

Division of vital statistics:

*J. L. Jones, M. D., Dr. P. H., State registrar, Salt Lake City.

*Eva W. Ramsey, deputy registrar, Salt Lake City.

Division of sanitary engineering:

*Lynn M. Thatcher, director, Salt Lake City.

Bacteriological laboratory:

*E. H. Bramhall, director, Salt Lake City.

Division of epidemiology:

*Wm. M. McKay, M. D., M. P. H., director, Salt Lake City.

Veneral disease control and local health administration:

*D. D. Carr, M. D., C. P. H., director, Salt Lake City.

Division of maternal and child health:

*Mildred Nelson, M. D., director, Salt Lake City.

Division of public health nursing:

*Lily Hagerman, R. N., State advisory nurse, Salt Lake City.

Division of crippled children's service:

*Marcella McInnery, R. N., director, Salt Lake City.

County and district health units:

*D. Keith Barnes, M. D., C. P. H., director, Davis County, Kaysville.

*Welby W. Bigelow, M. D., health officer, district no. 1, Salt Lake City.

*Alton A. Jenkins, M. D., health officer, district no. 2, Cedar City.

*Edw. L. Van Aelstyn, M. D., health officer, district no. 3, Price.

Appropriations for fiscal year ending June 30, 1937, \$104,724.71.

VERMONT DEPARTMENT OF PUBLIC HEALTH**State board of health:**

Charles G. Abell, M. D., chairman, Enosburg Falls.

Claude M. Campbell, M. D., Manchester Center.
Clarence H. Burr, M. D., Montpelier.

Executive health officer:

*Charles F. Dalton, M. D., secretary, State board of health, Burlington.

Laboratory of hygiene:

*Charles F. Whitney, M. D., Burlington.

Sanitary engineering:

Earle L. Waterman, C. E., director, Burlington.

Sanitary inspector:

*Fred S. Kent, M. D., Burlington.

Division of communicable diseases:

*Fred S. Kent, M. D., Burlington.

Division of tuberculosis and industrial hygiene:

*Harold W. Slocum, Burlington.

Division of crippled children:

*Miss Lillian E. Kron, R. N., Burlington.

Division of public health nursing:

*Miss Nellie M. Jones, R. N.

Division of maternal and child health:

*Paul D. Clark, M. D.

Appropriations for fiscal year ending June 30, 1938, \$64,000; 1939, \$64,000.

Other sources of revenue: Private donations for study and treatment of infantile paralysis.

Publications issued by the department of public health:

Biennial report.

Modern Health Crusader.

VIRGIN ISLANDS DEPARTMENT OF HEALTH**Executive health officer:**

*Knud Knud-Hansen, M. D., commissioner of public health, Charlotte Amalie.

VIRGINIA DEPARTMENT OF HEALTH**Board of health:**

W. T. Graham, M. D., president, Richmond.

Mrs. Franklin H. Kenworthy, Purcellville.

Frank Darling, Hampton.

W. R. Williams, M. D., Richlands.

George B. Lawson, M. D., Roanoke.

Guy R. Harrison, D. D. S., Richmond.

L. T. Royster, M. D., University.

Executive health officer:

*I. C. Riggins, M. D., State health commissioner, Richmond.

Assistant health officer:

*Roy K. Flannagan, M. D., Richmond.

Director of rural health work and tuberculosis out-patient service:

*C. H. Eller, M. D., D. P. H., Richmond.

Epidemiologist:

*G. F. McGinnes, M. D., Richmond.

Director of child health:

*B. B. Bagby, M. D., Richmond.

Registrar of vital statistics:

*W. A. Flecker, M. D., Richmond.

Director of public health nursing:

*Mary I. Mastin, R. N., Richmond.

Director of mouth hygiene:

*N. T. Ballou, D. D. S., Richmond.

Acting director of laboratories:

*Adah Corpening, Richmond.

Chief sanitary engineer:

*Richard Messer, C. E., Richmond.

Director of crippled children's bureau:

*E. C. Harper, M. D.

Director of health education:

*J. C. Funk.

Director of industrial hygiene:

*W. T. Tillson, M. D.

Appropriations for the year July 1, 1937, to June 30, 1938:

Administration.....	\$22, 675
Health education.....	8, 950
Sanitary engineering.....	18, 870
Shellfish sanitation.....	15, 000
Rural health.....	113, 475
Town and camp sanitation.....	4, 075
Tuberculosis out-patient service.....	45, 000
Communicable diseases.....	16, 875
Venereal disease control.....	1, 545
Laboratories.....	19, 200
Crippled children.....	36, 250
Promotion of child health:	
Maternal and child health.....	
Public health nursing.....	44, 100
Mouth hygiene.....	
Vital statistics.....	38, 890
State aid to local tuberculosis sanatoria.....	34, 000
State tuberculosis sanatoria.....	318, 315
Total.....	737, 220

Publications issued by health department:

- Monthly bulletin.
- Annual report.
- Pamphlets from time to time dealing with communicable diseases, sanitation, etc.

WASHINGTON STATE DEPARTMENT OF HEALTH

Board of health:

- Donald G. Evans, M. D., C. P. H., director of health, chairman, Seattle.
- Ralph Hendricks, M. D., Spokane.
- Alexander Peacock, M. D., Seattle.
- H. E. Wight, D. D. S., Yakima.
- E. N. Hutchinson, D. V. M., Olympia.
- Francis D. Rhoads, secretary, Seattle.

Department of health:

- Office of the director:
 - *Donald G. Evans, M. D., C. P. H., director of health, Seattle.
 - *R. H. Fletcher, M. D., assistant director, Seattle.

Division of public health nursing:

*Anna E. Moore, R. N., Seattle.

Division of health education:

*Charles Hilton, Seattle.

Division of laboratories:

*A. U. Simpson, M. D., Seattle.

Division of public health engineering:

*Roy M. Harris, C. E., Seattle.

Division of maternal and child hygiene:

*Percy F. Guy, M. D., Seattle.

Division of vital statistics:

*Francis D. Rhoads, State registrar, Seattle.

Appropriation for 2 years ending March 31, 1939:

From general fund:	
Salaries and wages.....	\$120, 000
Operations.....	65, 407
Total.....	185, 407

The above amount is exclusive of appropriation supplementary to grants from U. S. Public Health Service and the Children's Bureau.

WEST VIRGINIA DEPARTMENT OF HEALTH

Public health council:

- Walter E. Vest, M. D., president, Huntington.
- A. H. Hoge, M. D., Bluefield.
- S. W. Price, M. D., Scarbro.
- M. T. Morrison, M. D., Sutton.
- B. H. Swint, M. D., Charleston.
- W. C. D. McCuskey, M. D., Wheeling.
- W. E. Minghini, D. D. S., Martinsburg.
- Arthur E. McClue, M. D., ex-officio secretary.

Executive health officer:

*Arthur E. McClue, M. D., commissioner of health, Charleston.

Division of sanitary engineering:

- *E. S. Tisdale, chief engineer, Charleston.
- *John B. Harrington, associate engineer, Charleston.
- *A. J. Kranaskas, assistant engineer, Charleston.
- *Kenneth Watson, assistant engineer, Charleston.

Bureau of industrial hygiene:

- *John F. Cadden, M. D., director, Charleston.
- *E. T. Roetman, engineer, Charleston.
- *S. C. Rothman, engineer, Charleston.

Division of vital statistics:

*Franklin H. Reeder, M. D., director, Charleston.

Division of child hygiene:

- *Thomas W. Nale, M. D., acting director, Charleston.
- *Laurene C. Fisher, R.N., Charleston.

Bureau of venereal diseases:

*C. N. Scott, M. D., director, Charleston.

Bureau of county health work:

- *A. M. Price, M. D., director, Charleston.
- *H. K. Gidley, engineer, Charleston.

Bureau of public health education:

*Dorothea Campbell, director, Charleston.

Hygienic laboratory:

- *Katherine E. Cox, director, Charleston.
- *Margaret K. Riffe, serologist, Charleston.
- *J. Roy Monroe, bacteriologist, Charleston.
- *Mark Harp, bacteriologist, Charleston.
- *Mary Prince Fowler, junior serologist, Charleston.
- *David Dale Johnson, junior bacteriologist, Charleston.
- *Guido Innarelli, junior bacteriologist, Charleston.

Appropriation for fiscal year ending June 30, 1938:

For general use.....	\$155, 400
Compensation department.....	4, 200
	159, 600

WISCONSIN STATE BOARD OF HEALTH

Board of health:

- Joseph Dean, M. D., president, Madison.
- Mina B. Glasier, M. D., vice president, Bloomington.
- Stephen Cahana, M. D., Milwaukee.
- J. J. Seelman, M. D., Milwaukee.
- Wm. W. Kelly, M. D., Green Bay.
- R. L. MacCormack, M. D., Whitehall.
- C. A. Harper, M. D., State health officer, Madison.

Executive health officer:

*C. A. Harper, M. D., State health officer, Madison.

Assistant State health officer:

*Carl N. Neupert, M. D., Madison.

Venereal disease control officer and supervisor of Public Health Service:

*Milton Trautmann, M. D., Madison.

Deputy State health officers:

- *G. W. Henika, M. D., Madison.
- *Geo. E. Hoyt, M. D., Elkhorn.
- *V. A. Gudex, M. D., Fond du Lac.
- *R. L. Frisbie, M. D., Rhineland.
- *F. P. Daly, M. D., Chippewa Falls.

District health officers:

- *E. H. Jorris, M. D., Sparta.
- *Allan Filek, M. D., Green Bay.
- *John W. Lowe, M. D., Ashland.
- *Leo M. Morse, M. D., Neillsville.

Bureau of vital statistics:

- *C. A. Harper, M. D., State registrar, Madison.
- *L. W. Hutchcroft, chief statistician, Madison.
- *F. E. Kester, senior statistician, Madison.

Bureau of communicable diseases:

- *H. M. Guilford, M. D., director, Madison.
- *A. C. Edwards, M. D., senior epidemiologist, Madison.

Bureau of sanitary engineering:

- *L. F. Warrick, State sanitary engineer, Madison.
- *O. J. Muegge, assistant sanitary engineer, Madison.
- *E. J. Beatty, assistant sanitary engineer, Madison.
- *J. M. Holderby, assistant sanitary engineer, Madison.
- *E. J. Tully, assistant chemical engineer, Madison.
- *Roy F. Weston, assistant sanitary engineer, Madison (district).
- *Alfred Steffen, assistant sanitary engineer, Elkhorn (district).
- *Chester Obama, assistant sanitary engineer, Fond du Lac (district).
- *Reginald C. Price, assistant sanitary engineer, Sparta (district).
- *Gerry Halverson, assistant sanitary engineer, Neillsville (district).
- *Frank J. McKee, assistant sanitary engineer, Green Bay (district).
- *Alfred W. West, assistant sanitary engineer, Chippewa Falls (district).
- *Charles L. Senn, assistant sanitary engineer, Rhineland (district).
- *Harold Kingsbury, assistant sanitary engineer, Ashland (district).

Bureau of education:

- *John Culnan, editor, Madison.
- *Gertrude Pankow, illustrator, Madison.

Bureau of maternal and child health:

- *Amy L. Hunter, M. D., chief, Madison.
- *Frances A. Cline, M. D., child health physician, Rhineland.
- *Elizabeth Taylor, M. D., child health physician, Madison.
- *Ruth B. Bennett, M. D., child health physician, Madison.
- *Charlotte Fisk, M. D., child health physician, Madison.
- *Bessie Mae Beach, M. D., child health physician, Madison.
- *Evelyn B. Johnson, M. D., child health physician, Madison.
- *Maud Jenson, R. N., public health nurse, Madison.
- *Grace M. Connors, R. N., public health nurse, Wautoma.
- *Sadie Engesether, R. N., public health nurse, Frederic.
- *Mildred Cook, R. N., public health nurse, Green Bay.
- *Ruth B. Naset, R. N., instructor in maternity and child hygiene, Madison.
- *Martha Grether, R. N., assistant instructor in maternity and child hygiene, Madison.
- *Catherine Chambers, R. N., assistant instructor in maternity and child hygiene, Madison.
- *Katheryn Lynch, R. N., assistant instructor in maternity and child hygiene, Madison.

Bureau of public health nursing:

- *Cornelia van Kooy, R. N., supervisor, Madison.
- *Martha R. Jenny, R. N., advisory public health nurse, Madison.
- *Inga Erickson, R. N., advisory public health nurse, Madison.
- *Ione M. Rowley, R. N., advisory public health nurse, Madison.
- *Sophia B. Paulus, R. N., public health nurse, Madison (district).
- *Vera Roswell, R. N., public health nurse, Elkhorn (district).
- *Gertrude Lorber, R. N., public health nurse, Fond du Lac (district).
- *Mildred Knoebel, R. N., public health nurse, Sparta (district).
- *Lila J. Johnson, R. N., public health nurse, Neillsville (district).
- *Margaret Brunner, R. N., public health nurse, Chippewa Falls (district).
- *Nellie McLaughlin, R. N., public health nurse, Indian Service, Ashland.

Bureau of nursing education:

- *Barbara A. Thompson, R. N., director, Madison.
- *Carrie May Dokken, R. N., assistant supervisor, Madison.

Bureau of plumbing and domestic sanitary engineering:

- *Frank R. King, State domestic sanitary engineer, Madison.
- *Louis T. Watry, well drilling supervisor, Madison.

Bureau of social hygiene:

- *H. M. Guilford, M. D., director, Madison.
- *Aimee Zillmer, lecturer, Madison.
- *Dwight M. Warner, lecturer, Madison.
- *Susan B. Mitchell, R. N., venereal clinic nurse, Madison.
- *Leona Ludwig, venereal clinic nurse, Janesville.
- *Irene Ryss, R. N., venereal clinic nurse, Oshkosh.
- *Margaret Gebhardt, R. N., venereal clinic nurse, La Crosse.
- *Pauline Carrington, R. N., venereal clinic nurse, Superior.
- *Doris Fink, R. N., venereal clinic nurse, Racine.
- *Josephine Kotes, R. N., venereal clinic nurse, Milwaukee.

Paul C. Gatterdam, M. D., venereal clinic physician, La Crosse.

Charles W. Giesen, M. D., venereal clinic physician, Superior.

C. R. Gilbertsen, M. D., venereal clinic physician, Janesville.

F. H. Frey, M. D., venereal clinic physician, Wausau.

C. G. Richards, M. D., venereal clinic physician, Kenosha.

Joseph C. Dean, M. D., venereal clinic physician, Madison.

Earl F. Cummings, M. D., venereal clinic physician, Oshkosh.

Laboratory service:

- *W. D. Stovall, M. D., director, State laboratories, Madison.
- *M. S. Nichols, chemist, State laboratory, Madison.
- *Anna Brandsmark, director, branch laboratory, Rhineland.
- *Mildred Jacobson, director, cooperative laboratory, Beloit.
- *Marjorie Bates, director, cooperative laboratory, Oshkosh.
- *Henry Miller, director, cooperative laboratory, Kenosha.
- *Josephine Foote, director, cooperative laboratory, Wausau.
- *Martha Thompson, director, cooperative laboratory, Superior.
- *Clarissa McFetridge, director, cooperative laboratory, Green Bay.
- *Elizabeth Mathewson, director, cooperative laboratory, Sheboygan.

Industrial hygiene:

- *Paul A. Brehm, M. D., supervisor, Madison.
- *Harold W. Ruf, sanitary engineer, Madison.
- *William Z. Fluck, chemical engineer, Madison.

Appropriations for each of fiscal years ending June 30, 1938, and 1939:

General administration.....	\$155,000
Bureau of maternal and child health, and public health nursing.....	43,350
Enforcement of medical practices act.....	2,500

Specific appropriations..... 200,850
 To each county employing a county public health health nurse, \$1,000 per annum.

Licensing:

95% of the receipts, estimated at:	
Embalmers.....	8,300
Hotels and restaurants.....	36,000
Barbers.....	21,000
Plumbers.....	22,400
Beauty parlors.....	25,400
Nurses.....	15,200

(NOTE.—7% of the above estimated receipts, or \$9,981, to be allotted to general administration for overhead.)

90% of the receipts, estimated at:	
Well drillers.....	3,735

Estimated appropriations..... 132,035

Publications issued by health department:
 Quarterly bulletin.
 Biennial report.
 Other bulletins on communicable diseases.

WYOMING DEPARTMENT OF PUBLIC HEALTH

Board of health:
 Earl Whedon, M. D., president, Sheridan.
 E. W. DeKay, M. D., Laramie.
 N. E. Morad, M. D., Casper.
 J. R. Newnam, M. D., Kemmerer.

Board of health—Continued.

G. M. Anderson, M. D., secretary and executive officer, Cheyenne.

Executive health officer:

*G. M. Anderson, M. D., State health officer Cheyenne.

Appropriations for biennial period ending

March 31, 1939:	
State board of health.....	\$11,000
Salary of secretary.....	8,000
Maternal and infant welfare.....	6,850
Bureau of vital statistics.....	3,880

Total..... 29,730

DEATHS DURING WEEK ENDED OCTOBER 23, 1937

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Oct. 23, 1937	Correspond- ing week, 1936
Data from 86 large cities of the United States:		
Total deaths.....	8,200	8,099
Average for 3 prior years.....	7,833	-----
Total deaths, first 42 weeks of year.....	362,706	362,316
Deaths under 1 year of age.....	493	561
Average for 3 prior years.....	549	-----
Deaths under 1 year of age, first 42 weeks of year.....	23,318	23,424
Data from industrial insurance companies:		
Policies in force.....	70,003,932	68,683,645
Number of death claims.....	13,138	12,684
Death claims per 1,000 policies in force, annual rate.....	9.8	9.7
Death claims per 1,000 policies, first 42 weeks of year, annual rate.....	9.8	9.9

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

In these and the following tables a zero (0) is to be interpreted to mean that no cases or deaths occurred, while leaders (.....) indicate that cases or deaths may have occurred, although none was reported.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 30, 1937, and Oct. 31, 1936.

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936
New England States:								
Maine.....	1	1	.....	.....	19	13	0	1
New Hampshire.....	1	.....	.....	.....	40	2	0	1
Vermont.....	1	3	.....	.....	14	3	0	0
Massachusetts.....	3	2	.....	.....	28	66	2	1
Rhode Island.....	.....	1	.....	.....	3	27	2	0
Connecticut.....	2	2	4	.....	2	12	1	0
Middle Atlantic States:								
New York.....	30	22	17	110	86	60	7	8
New Jersey.....	10	8	9	12	121	25	2	4
Pennsylvania.....	25	36	.....	.....	287	32	2	2
East North Central States:								
Ohio.....	64	48	19	19	300	10	2	3
Indiana.....	25	31	32	28	11	4	0	5
Illinois.....	42	35	8	6	121	10	1	5
Michigan.....	31	24	1	2	24	17	1	0
Wisconsin.....	8	3	31	15	33	29	2	4
West North Central States:								
Minnesota.....	25	19	2	.....	4	16	1	0
Iowa.....	3	4	.....	2	3	3	1	0
Missouri.....	62	21	35	56	167	3	0	0
North Dakota.....	3	1	2	.....	.....	1	0	1
South Dakota.....	2	.....	.....	.....	.....	1	0	0
Nebraska.....	1	.....	3	1	1	3	1	0
Kansas.....	30	10	6	.....	10	2	0	0
South Atlantic States:								
Delaware.....	.....	.....	.....	4	.....	1	0	0
Maryland ¹	16	10	7	6	3	17	1	5
District of Columbia.....	8	9	.....	.....	1	4	1	4
Virginia.....	43	58	.....	.....	44	6	3	4
West Virginia.....	39	21	16	14	29	8	2	2
North Carolina.....	114	164	2	7	101	15	2	3
South Carolina ²	29	25	229	192	8	5	1	1
Georgia ³	42	44	.....	.....	.....	.....	1	1
Florida ⁴	18	15	6	5	4	.....	1	1

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 30, 1937, and Oct. 31, 1936—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936
East South Central States:								
Kentucky.....	37	37	5	17	35	20	3	6
Tennessee.....	43	94	18	70	22	1	4	0
Alabama.....	40	64	45	26	1	2	4	0
Mississippi.....	17	15					0	2
West South Central States:								
Arkansas.....	25	12	19	48	5		1	1
Louisiana.....	23	15	10	5	2	1	1	1
Oklahoma.....	37	7	32	47		6	1	0
Texas.....	39	63	134	102	8	18	1	0
Mountain States:								
Montana.....		2	36	4	34	1	0	1
Idaho.....		3	4	3	4	9	1	9
Wyoming.....		1			1	2	1	0
Colorado.....	9	6			30	1	3	1
New Mexico.....	2	5	2	1	24	4	1	1
Arizona.....	13	2		33	3	23	0	0
Utah.....	21	1	1		34	13	0	1
Pacific States:								
Washington.....	3	2			9	8	0	1
Oregon.....	3	2	15	34	14	6	1	0
California.....	28	49	17	26	37	24	1	2
Total.....	1,018	997	756	795	1,727	534	60	73
First 43 weeks of year.....	20,576	21,244	279,394	144,402	250,987	271,304	4,732	6,479

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever		Whooping cough
	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	
New England States:									
Maine.....	2	2	10	2	0	0	4	1	16
New Hampshire.....	0	0	2	3	0	0	0	0	12
Vermont.....	0	0	11	4	0	0	2	1	8
Massachusetts.....	2	3	109	103	0	0	2	0	89
Rhode Island.....	0	0	10	12	0	0	1	0	17
Connecticut.....	5	0	35	33	0	0	2	0	15
Middle Atlantic States:									
New York.....	14	6	188	238	0	0	11	22	307
New Jersey.....	4	0	62	37	0	0	4	2	71
Pennsylvania.....	8	9	177	230	0	0	20	35	
East North Central States:									
Ohio.....	7	22	251	226	1	0	13	21	100
Indiana.....	4	4	125	58	1	1	2	2	27
Illinois.....	16	39	273	243	3	1	18	27	83
Michigan.....	9	13	308	187	0	0	7	5	179
Wisconsin.....	11	3	95	163	0	6	0	5	240
West North Central States:									
Minnesota.....	12	0	78	95	2	4	3	0	45
Iowa.....	3	6	101	70	8	10	3	1	
Missouri.....	11	2	181	77	10	1	24	14	78
North Dakota.....	0	1	45	33	21	15	0	5	41
South Dakota.....	2	0		39	0	7	1	0	38
Nebraska.....	1	0	12	17	0	4	0	0	23
Kansas.....	3	8	91	99	1	0	3	2	63
South Atlantic States:									
Delaware.....	0	0	8	4	0	0	0	3	9
Maryland.....	1	2	37	51	0	0	4	8	70
District of Columbia.....	1	0	14	15	0	0	1	0	5
Virginia.....	2	2	65	36	0	0	3	13	54
West Virginia.....	1	2	110	79	0	0	11	25	26

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 30, 1937, and Oct. 31, 1936—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever		Whooping cough
	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937	Week ended Oct. 31, 1936	Week ended Oct. 30, 1937
North Carolina.....	2	1	63	83	0	0	9	8	104
South Carolina ¹	0	0	10	7	0	0	5	8	25
Georgia ²	1	5	33	17	0	0	8	28	5
Florida ³	0	1	7	6	0	0	3	0	-----
East South Central States:									
Kentucky.....	0	2	81	82	25	0	7	40	81
Tennessee.....	7	23	44	46	0	1	19	9	19
Alabama ³	3	10	19	23	0	1	2	13	14
Mississippi ¹	5	2	17	12	0	0	9	8	-----
West South Central States:									
Arkansas.....	7	4	25	11	1	0	16	9	20
Louisiana ³	3	0	18	7	0	0	12	11	2
Oklahoma ⁴	3	6	52	22	0	2	21	7	28
Texas ⁴	4	6	56	41	1	0	38	23	-----
Mountain States:									
Montana.....	1	0	14	33	10	7	3	4	13
Idaho.....	0	0	18	29	11	0	3	2	3
Wyoming.....	0	0	9	9	0	0	0	0	16
Colorado.....	2	1	26	17	3	0	5	4	4
New Mexico.....	0	3	34	17	0	0	11	11	28
Arizona.....	0	0	3	8	0	0	3	0	12
Utah ³	2	0	35	19	3	1	2	0	17
Pacific States:									
Washington.....	4	1	22	40	8	3	3	2	61
Oregon.....	1	2	17	27	4	1	2	4	18
California ³	14	4	152	176	1	0	5	5	216
Total.....	178	195	3, 153	2, 916	116	65	325	388	2, 302
First 43 weeks of year.....	8, 853	3, 729	183, 639	195, 578	8, 662	6, 327	13, 291	12, 592	-----

¹ New York City only.

² Week ended earlier than Saturday.

³ Typhus fever, week ended Oct. 30, 1937, 47 cases, as follows: South Carolina, 1; Georgia, 22; Florida, 3; Alabama, 12; Louisiana, 1; Texas, 7; California, 1.

⁴ Figures for 1936 are exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Menin- gococ- cus- menin- gitis	Diph- theria	Influ- enza	Malar- ia	Meas- les	Pel- lagra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>September 1937</i>										
Arkansas.....	1	63	59	766	8	13	39	34	1	60
California.....	13	102	68	42	115	7	194	422	14	101
Hawaii Territory.....	0	14	2, 607	-----	81	-----	1	-----	11	10
Mississippi.....	2	84	1, 060	6, 521	320	312	-----	43	0	39
Montana.....	1	5	7	-----	29	-----	13	68	22	12
Oregon.....	2	6	38	10	15	-----	11	41	10	11
Texas.....	12	137	310	2, 106	100	134	106	95	2	233
Washington.....	1	6	12	-----	47	-----	27	60	66	15

¹ On vessel.

September 1937		September 1937—Continued		September 1937—Continued	
Actinomycosis:	Cases	Hookworm disease:	Cases	Scabies:	Cases
Montana.....	1	Hawaii Territory.....	5	Montana.....	1
Anthrax:		Mississippi.....	372	Oregon.....	78
California.....	1	Impetigo contagiosa:		Septic sore throat:	
Botulism:		Hawaii Territory.....	33	Arkansas.....	6
California.....	2	Montana.....	5	California.....	7
Chickenpox:		Oregon.....	62	Hawaii Territory.....	7
Arkansas.....	3	Washington.....	4	Montana.....	7
California.....	338	Jaundice, epidemic:		Oregon.....	3
Hawaii Territory.....	23	California.....	4	Washington.....	3
Mississippi.....	178	Hawaii Territory.....	6	Tetanus:	
Montana.....	34	Oregon.....	1	California.....	10
Oregon.....	47	Leprosy:		Washington.....	2
Texas.....	58	California.....	2	Trachoma:	
Washington.....	67	Hawaii Territory.....	3	Arkansas.....	3
Conjunctivitis:		Mumps:		California.....	51
Hawaii Territory.....	3	Arkansas.....	7	Hawaii Territory.....	41
Washington.....	1	California.....	532	Montana.....	1
Dengue:		Hawaii Territory.....	52	Oregon.....	2
Mississippi.....	4	Mississippi.....	96	Trichinosis:	
Texas.....	10	Montana.....	40	California.....	6
Dysentery:		Oregon.....	11	Tularaemia:	
Arkansas (amoebic)....	7	Texas.....	84	Arkansas.....	1
California (amoebic)....	13	Washington.....	128	California.....	4
California (bacillary)....	67	Ophthalmia neonatorum:		Texas.....	5
Hawaii Territory (bacillary).....	1	Arkansas.....	2	Typus fever:	
Mississippi (amoebic)....	88	California.....	1	California.....	3
Mississippi (bacillary)....	458	Mississippi.....	9	Hawaii Territory.....	4
Texas (bacillary).....	182	Paratyphoid fever:		Texas.....	57
Washington (bacillary)....	2	California.....	7	Undulant fever:	
Encephalitis, epidemic or lethargic:		Texas.....	12	Arkansas.....	3
California.....	27	Washington.....	1	California.....	32
Montana.....	7	Plague:		Mississippi.....	1
Oregon.....	1	California (delayed report).....	1	Montana.....	3
Washington.....	2	Puerperal septicemia:		Texas.....	20
Food poisoning:		Mississippi.....	27	Washington.....	3
California.....	52	Rabies in animals:		Vincent's infection:	
German measles:		California.....	170	Montana.....	1
California.....	74	Texas.....	1	Oregon.....	12
Montana.....	3	Washington.....	15	Whooping cough:	
Washington.....	4	Relapsing fever:		Arkansas.....	51
Granuloma, coccidioidal:		California.....	5	California.....	1,215
California.....	1	Rocky Mountain spotted fever:		Hawaii Territory.....	26
		California.....	1	Mississippi.....	386
				Montana.....	114
				Oregon.....	61
				Texas.....	472
				Washington.....	201

PLAGUE INFECTION IN CALIFORNIA

Under date of October 25, 1937, Dr. W. M. Dickie, Director of Public Health of California, reported plague infection proved by animal inoculation in organs from a flying squirrel, *Glaucomys sabrinus lascius* Bangs, and in a pool of organs from 2 white footed mice, all collected October 9 at Billy Creek Public Camp, 3 miles west of Lake Shore Resort, Huntington Lake, Fresno County, Calif.; in a pool of organs from 10 golden mantled squirrels from the Billy Creek area, 5 golden mantled squirrels from the Huntington Lodge area, and 9 golden mantled squirrels from the Cedar Crest area, Fresno County, received October 4; and in a pool of organs from 10 California chick-aree squirrels (*Sciurus douglasii albolimatus* Allen) collected in the Tahoe area, Placer County, Calif.

WEEKLY REPORTS FROM CITIES

City reports for week ended Oct. 23, 1937

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average	280	129	27	180	441	843	6	352	64	773	-----
Current week	133	98	31	351	501	710	17	327	41	710	-----
Maine:											
Portland	0		0	0	4	0	0	0	0	2	31
New Hampshire:											
Concord	0		0	2	2	0	0	0	0	3	10
Manchester	0		0	0	1	1	0	1	0	0	29
Nashua	0		0	0	0	1	0	0	0	0	5
Vermont:											
Barre	0		0	6	0	0	0	0	0	0	1
Burlington	0		0	0	0	2	0	0	0	0	7
Rutland	0		0	1	0	0	0	0	0	1	5
Massachusetts:											
Boston	0		0	8	22	29	0	13	0	13	198
Fall River	0		0	0	1	3	0	4	0	19	48
Springfield	0		0	0	1	2	0	1	1	5	37
Worcester	0		0	1	7	0	0	2	1	2	55
Rhode Island:											
Pawtucket	0		0	0	0	1	0	0	0	0	12
Providence	0		0	0	2	7	0	2	0	21	70
Connecticut:											
Bridgeport	1		0	0	3	7	0	2	0	1	33
Hartford	1		0	1	0	1	0	0	0	6	38
New Haven	0		0	0	1	2	0	1	0	1	46
New York:											
Buffalo	1		1	1	0	22	0	1	0	12	136
New York	26	12	4	19	89	65	0	59	8	98	1,416
Rochester	0		0	0	1	1	0	2	0	1	67
Syracuse	0		0	0	6	10	0	0	0	5	50
New Jersey:											
Camden	0	1	0	0	2	1	0	0	1	0	23
Newark	0	1	1	0	6	3	0	9	0	8	95
Trenton	0		1	31	1	0	0	4	0	0	41
Pennsylvania:											
Philadelphia	3	3	3	3	26	35	0	22	3	27	493
Pittsburgh	1	1	1	77	25	31	0	6	1	18	187
Reading	1		0	1	3	4	0	1	0	1	20
Scranton	0			8		0			0	5	-----
Ohio:											
Cincinnati	4		0	0	6	8	0	5	0	5	128
Cleveland	2	8	1	27	9	25	0	11	0	15	195
Columbus	3	1	1	1	7	9	0	3	0	1	80
Toledo	1	1	1	0	2	5	0	3	0	2	62
Indiana:											
Anderson	0		0	1	1	6	0	0	0	5	9
Fort Wayne	1		0	0	3	2	0	1	0	0	28
Indianapolis	3		1	1	8	13	0	4	1	7	109
Muncie	0		0	0	1	0	0	0	0	0	14
South Bend	0		0	1	0	0	0	0	0	2	15
Terre Haute	0		0	0	0	1	0	0	0	0	19
Illinois:											
Alton	0		0	12	0	4	0	0	0	0	12
Chicago	10	7	0	22	30	83	0	39	3	41	673
Elgin	0		0	0	0	2	0	1	0	0	10
Moline	0		0	0	0	1	0	0	0	2	9
Springfield	1		0	0	2	4	0	0	2	0	17
Michigan:											
Detroit	11	1	1	26	27	60	0	15	3	53	265
Flint	3	3	0	1	3	11	0	0	0	11	28
Grand Rapids	0		0	1	2	19	0	0	0	16	48
Wisconsin:											
Kenosha	0		0	0	0	3	0	0	0	3	7
Madison	0		0	2	0	1	0	2	0	6	24
Milwaukee	1		0	9	7	9	0	5	0	45	117
Racine	0		0	0	0	5	0	0	0	4	8
Superior	2		0	0	0	0	0	0	0	0	11
Minnesota:											
Duluth	0		0	0	1	3	0	1	0	7	21
Minneapolis	1		1	2	4	22	0	1	0	16	90
St. Paul	1		0	1	5	2	0	2	0	9	55

City reports for week ended Oct. 23, 1937—Continued

State and city	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
	Cases	Deaths								
Iowa:										
Cedar Rapids.....	0	0	0	0	0	0	0	0	0	0
Davenport.....	0	0	0	0	0	0	0	0	0	0
Des Moines.....	0	0	0	0	14	0	0	0	0	29
Sioux City.....	0	0	0	0	3	0	0	0	0	0
Waterloo.....	0	0	0	0	4	0	0	0	0	0
Missouri:										
Kansas City.....	0	0	0	2	15	0	4	0	1	115
St. Joseph.....	0	0	0	3	1	0	1	0	0	28
St. Louis.....	9	2	66	9	35	1	4	1	5	190
North Dakota:										
Fargo.....	0	0	0	0	2	0	0	0	6	0
Grand Forks.....	0	0	0	0	11	0	0	0	4	0
Minot.....	0	0	0	0	1	0	0	0	0	2
South Dakota:										
Aberdeen.....	0	0	0	0	0	0	0	0	1	0
Sioux Falls.....	0	0	0	0	0	0	0	0	0	8
Nebraska:										
Omaha.....	2	0	0	2	3	0	2	0	0	46
Kansas:										
Lawrence.....	0	0	0	1	0	0	0	0	0	7
Topeka.....	0	1	0	2	1	0	0	0	1	14
Wichita.....	0	0	0	0	4	0	2	0	6	28
Delaware:										
Wilmington.....	2	0	0	2	0	0	1	0	5	26
Maryland:										
Baltimore.....	2	9	1	3	26	12	14	1	44	234
Cumberland.....	0	0	0	2	0	0	0	0	4	16
Frederick.....	0	0	0	0	0	0	0	0	0	2
Dist. of Col.:										
Washington.....	5	2	1	3	16	5	6	3	6	165
Virginia:										
Lynchburg.....	0	0	0	0	1	0	0	0	1	7
Norfolk.....	0	0	0	0	2	0	4	0	0	32
Richmond.....	1	0	1	4	3	0	2	0	1	69
Roanoke.....	1	0	0	5	0	0	1	1	1	26
West Virginia:										
Charleston.....	1	1	0	1	2	0	0	0	0	23
Huntington.....	1	0	3	0	3	0	0	0	0	0
Wheeling.....	0	1	1	0	6	0	0	0	7	7
North Carolina:										
Gastonia.....	5	0	0	0	0	0	0	0	0	0
Raleigh.....	1	0	0	4	0	0	0	0	8	21
Wilmington.....	0	0	0	0	0	0	0	0	7	16
Winston-Salem.....	0	0	0	1	1	0	0	1	1	13
South Carolina:										
Charleston.....	0	0	0	3	3	0	0	2	0	27
Columbia.....	0	0	0	2	0	0	0	0	0	10
Florence.....	0	0	0	0	0	0	0	0	0	9
Greenville.....	0	0	0	2	1	0	0	0	0	11
Georgia:										
Atlanta.....	2	10	1	1	11	11	4	1	1	72
Brunswick.....	0	0	0	1	0	0	1	0	0	4
Savannah.....	3	23	1	0	1	0	1	0	1	31
Florida:										
Miami.....	0	0	1	3	0	0	0	0	0	32
Tampa.....	0	1	1	0	2	0	0	0	0	19
Kentucky:										
Ashland.....	3	0	0	0	1	0	0	0	0	1
Covington.....	0	0	0	3	1	0	0	0	0	14
Lexington.....	0	0	0	3	2	0	2	0	6	18
Louisville.....	0	0	0	12	14	0	4	0	12	83
Tennessee:										
Knoxville.....	3	0	1	2	5	0	0	0	0	29
Memphis.....	1	0	1	3	5	0	2	1	1	75
Nashville.....	1	0	0	8	3	0	2	0	3	50
Alabama:										
Birmingham.....	0	0	0	3	3	0	3	0	0	70
Mobile.....	1	2	6	1	0	0	0	0	0	23
Montgomery.....	4	0	0	0	1	0	0	0	1	0
Arkansas:										
Fort Smith.....	1	0	0	0	6	0	0	0	5	0
Little Rock.....	0	0	2	3	3	0	5	1	0	12
Louisiana:										
Lake Charles.....	0	0	0	0	0	0	0	0	0	4
New Orleans.....	2	5	0	12	2	0	15	2	0	131
Shreveport.....	1	0	0	4	1	0	1	0	0	38
Oklahoma:										
Oklahoma City.....	0	1	0	7	4	0	0	2	0	45
Tulsa.....	1	0	0	0	10	0	0	0	5	0

City reports for week ended Oct. 23, 1937—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Texas:											
Dallas.....	5	0	0	0	1	10	7	2	0	2	52
Fort Worth.....	1	1	0	1	0	4	0	0	0	1	39
Galveston.....	0	0	0	2	2	0	1	0	0	0	13
Houston.....	1	0	0	1	2	0	3	0	0	0	55
San Antonio.....	0	1	0	2	0	0	4	0	0	0	53
Montana:											
Billings.....	0	0	0	1	1	0	0	0	0	0	11
Great Falls.....	0	0	1	1	2	0	0	0	0	0	5
Helena.....	0	0	0	0	0	0	0	0	0	3	4
Missoula.....	0	0	0	0	0	0	0	0	0	0	5
Idaho:											
Boise.....	0	0	0	2	2	0	0	0	0	0	10
Colorado:											
Colorado Springs.....	0	0	0	0	2	0	0	0	0	0	4
Denver.....	3	0	11	4	6	0	2	0	0	5	64
Pueblo.....	1	0	0	1	3	0	1	0	0	0	15
New Mexico:											
Albuquerque.....	0	0	4	0	2	0	1	0	2	2	15
Utah:											
Salt Lake City.....	0	0	1	1	6	0	2	0	6	6	36
Washington:											
Seattle.....	0	0	2	7	2	1	4	0	20	98	
Spokane.....	0	1	1	0	6	1	4	0	2	42	
Tacoma.....	0	0	0	2	3	15	1	0	4	29	
Oregon:											
Portland.....	0	0	2	1	2	0	0	1	0	69	
Salem.....	0	0	0	0	0	0	0	1	1	0	
California:											
Los Angeles.....	9	2	1	6	12	41	0	13	2	28	311
Sacramento.....	2	1	1	0	3	3	0	1	1	16	33
San Francisco.....	0	5	0	4	6	3	0	2	0	36	165

State and city	Meningococcus meningitis		Polio-myelitis cases	State and city	Meningococcus meningitis		Polio-myelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:							
Boston.....	1	0	3	Nebraska:			
New York:				Omaha.....	0	0	2
Buffalo.....	1	1	0	Kansas:			
New York.....	7	3	8	Wichita.....	0	0	2
Syracuse.....	0	0	2	Maryland:			
New Jersey:							
Camden.....	0	0	1	Baltimore.....	2	0	0
Pennsylvania:							
Philadelphia.....	0	0	1	District of Columbia:			
Pittsburgh.....	0	1	0	Washington.....	3	0	1
Ohio:							
Cincinnati.....	3	1	0	South Carolina:			
Cleveland.....	0	0	2	Charleston.....	1	0	0
Columbus.....	1	0	0	Kentucky:			
Illinois:							
Chicago.....	2	0	5	Louisville.....	1	0	0
Michigan:							
Detroit.....	0	0	2	Tennessee:			
Grand Rapids.....	0	0	2	Knoxville.....	0	1	0
Wisconsin:							
Milwaukee.....	0	0	2	Memphis.....	0	0	1
Racine.....	0	0	1	Alabama:			
Minnesota:							
Minneapolis.....	0	0	5	Mobile.....	0	0	1
St. Paul.....	0	0	4	Louisiana:			
Iowa:							
Des Moines.....	0	0	1	New Orleans.....	0	0	3
Missouri:							
Kansas City.....	0	0	1	Shreveport.....	0	2	0
St. Joseph.....	0	0	2	Oklahoma:			
St. Louis.....	1	1	1	Oklahoma City.....	1	0	1
North Dakota:							
Fargo.....	0	0	1	Colorado:			
				Denver.....	1	0	0
				New Mexico:			
				Albuquerque.....	1	0	0
				Washington:			
				Seattle.....	0	0	1
				Oregon:			
				Portland.....	0	0	1
				California:			
				Sacramento.....	1	1	1
				San Francisco.....	1	0	2

Encephalitis, epidemic or lethargic.—Cases: New York, 2; Des Moines, 1; St. Louis, 9.

Pellagra.—Cases: Charleston, S. C., 2; Atlanta, 4; Savannah, 1; Knoxville, 1; Los Angeles, 1; San Francisco, 1.

Typhus fever.—Cases: Baltimore, 1; Charleston, S. C., 1; Atlanta, 1; Lexington, 1; Mobile, 2.

FOREIGN AND INSULAR

CUBA

Provinces—Notifiable diseases—4 weeks ended October 16, 1937.—
 During the 4 weeks ended October 16, 1937, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Río	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer.....				5	1	1	7
Chicken pox.....	1				1	1	3
Diphtheria.....	2	28	3	3	2	1	39
Dysentery (bacillary).....		1					1
Leprosy.....		5				1	6
Malaria.....	128	106	87	93	17	148	579
Measles.....		3	2	1		1	7
Poliomyelitis.....			1			1	2
Scarlet fever.....			1				1
Tuberculosis.....	9	15	33	43	77	29	206
Typhoid fever.....	30	63	18	35	13	22	181
Undulant fever.....		1					1
Yaws.....						18	18

FINLAND

*Communicable diseases—September 1937.—*During the month of September 1937, cases of certain communicable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	440	Poliomyelitis.....	49
Dysentery.....	4	Scarlet fever.....	454
Influenza.....	1,302	Typhoid fever.....	66
Paratyphoid fever.....	159	Undulant fever.....	4

ITALY

*Communicable diseases—4 weeks ended August 15, 1937.—*During the 4 weeks ended August 15, 1937, cases of certain communicable diseases were reported in Italy as follows:

(1636)

Disease	July 19-25		July 26-Aug. 1		Aug. 2-8		Aug. 9-15	
	Cases	Com-munes affected	Cases	Com-munes affected	Cases	Com-munes affected	Cases	Com-munes affected
Anthrax.....	29	24	45	36	40	32	26	23
Cerebrospinal meningitis.....	16	15	10	10	14	13	22	18
Chicken pox.....	151	86	127	81	109	71	67	47
Diphtheria.....	372	198	374	190	368	210	433	242
Dysentery.....	115	47	103	43	109	43	111	53
Hookworm disease.....	25	10	16	10	26	12	13	8
Lethargic encephalitis.....	1	1			1	1	1	1
Measles.....	787	257	651	244	640	252	495	187
Mumps.....	180	83	161	74	159	74	149	68
Paratyphoid fever.....	200	133	179	124	249	141	287	146
Poliomyelitis.....	121	87	93	69	68	53	80	59
Puerperal fever.....	29	28	32	30	16	16	28	25
Rabies.....					1	1		
Scarlet fever.....	218	113	203	99	193	119	170	97
Typhoid fever.....	1,022	506	1,071	545	1,155	590	1,387	634
Undulant fever.....	88	73	98	76	87	69	67	53
Whooping cough.....	597	223	597	215	590	198	497	161

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for October 29, 1937, pages 1547-1562. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued November 26, 1937, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

Cholera

China.—During the week ended October 23, 1937, cholera was reported in China as follows: Hong Kong, 14 cases; Kwangchow Wan, 6 cases; Shanghai, 110 cases.

French Indochina.—During the week ended October 23, 1937, cholera was reported in French Indochina as follows: Annam, 1 case; Haiphong, 68 cases; Hanoi, 86 cases; Tonkin Province, 759 cases.

Plague

Peru.—During the month of September 1937, plague was reported in Peru as follows: Lambayeque Department, 2 cases, 1 death; Lima Department, 3 cases, 2 deaths.

United States—California.—A report of plague in California appears on page 1632 of this issue of PUBLIC HEALTH REPORTS.

Smallpox

Bolivia—La Paz.—According to press reports of La Paz, Bolivia, there is an epidemic of smallpox in that city, 30 cases having been reported up to September 16, 1937. General vaccination of the population has been ordered.

Yellow Fever

Brazil—Para State—Itagyary.—On September 15, 1937, 1 death from yellow fever was reported in Itagyary, Para State, Brazil.

Colombia.—Yellow fever has been reported in Colombia as follows: Medina, Cundinamarca Department, 1 death on September 18; Velez, Santander Department, 1 death on September 26; Villavicencio, Intendencia of Meta, 1 death on September 25.

Gold Coast—Mamidede.—On October 20, 1937, 1 case of yellow fever was reported in Mamidede, Gold Coast.

Nigeria—Shendam.—On September 23, 1937, 1 case of yellow fever was reported in Shendam, Nigeria.

Senegal.—Yellow fever has been reported in Senegal as follows: October 27, 1 suspected case in Kaolakh; October 24, 1 case in Thies and October 27, 1 case in the same locality.

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